

are
the
rch,
y in
nise
tion
nted
rded
gent
f in-
nd to
rious
the

Overseas students need commission

by John O'Leary

A conference of MPs, diplomats, academics and representatives of aid agencies called unanimously to advise an independent commission to advise on overseas student affairs and for a debate on student mobility at this year's meeting of Commonwealth heads of government.

Both resolutions were proposed by the former Conservative minister and current chairman of the Commons Select Committee on Foreign Affairs, Sir Anthony Kershaw. He urged delegates to the conference, held at Brunel University, to put pressure on the Government to give a high priority to the discussion on overseas students when the agenda for September's meeting in Melbourne is decided.

Sir Anthony described the recent expansion of Government scholarship schemes as "a drop in the ocean" and said he objected to the way in which fees were calculated, making no allowances for the money overseas students brought into the country. A commission was necessary because interdepartmental discussion between officials only had proved a failure.

Sir Roy Marshall, vice-chancellor of Hull University and chairman of the Commonwealth Education Liaison Committee, said the introduction of full-cost fees had been arbitrary, capricious and manifestly unjust, but public opinion had been unresponsive and apparently uncaring. Unregulated student mobility was a thing of the past but this did not preclude a system which benefited both the student and the host and sending countries.

Mr Geoffrey Caston, secretary general of the Committee of Vice-

Chancellors and Principals, said that not only was the current fees policy established without regard for its educational or developmental consequences, but most ministers were positively unsympathetic to the presence of overseas students in Britain in any case.

Senior officials from the Department of Education and Science, the Foreign and Commonwealth Office and the Overseas Development Administration took part in the conference, which was organized by the Council for Education in the Commonwealth. Lord Gordon Lennox, the Foreign Office representative, said that a commission was "quite a thought" but both he and Mr John Thompson of the DES agreed that the time was not right for its establishment.

Lord Lennox said that any new policy should be sufficiently flexible to allow the "maverick", who might not fit into neat categories or be favoured by his own government, the chance of studying in Britain.

Two Commonwealth diplomats also addressed the conference, criticizing the full-cost fees policy. Mr Funnah, High Commissioner for Sierra Leone, said he knew of African countries which would not be sending any students to Britain this year. It was a matter of great regret that the issue was now endangering cherished links between Britain and Sierra Leone.

Mr Ramgoolan, education adviser to the Mauritius High Commission, spoke of the resentment felt by a student from neighbouring Reunion, a French department, was charged less than those from Mauritius, the only English-speaking country in the area.

Now Middlesex school joins merger protest

by Robin McKie
Science Correspondent

Middlesex Medical School has joined University College and St Mary's School in denouncing the proposed triple merger between the three centres. The proposal, part of a package of recommended mergers, was originally put forward by London University joint medical advisory committee and is now being studied by a working party of academics.

It is proposed to save money by closing one pre-clinical school and one clinical school from the three medical centres, probably St Mary's pre-clinical and Middlesex's clinical.

But in its submission to the working party, led by Sir Richard Way, former principal of King's College London, the Middlesex rejects the idea that the JMAC's plan would lead to a worthwhile compromise in the reorganization of London's medical education.

It disputes that the forming of a triple conglomerate school would benefit health services in North-West London; would form a new robust structure for future medical education; or would lead to any academic improvements.

Instead, Middlesex calls for the formation of a joint medical school between itself and University College medical school—a plan already worked out in detail by the two centres. This move is also backed by University College and St Mary's, with the latter also calling for a separate association between itself and the Royal Postgraduate medical school.

The united opposition of the three medical schools to the proposed merger means it is now highly unlikely this move will eventually take place. But a final decision is not expected until the beginning of October when comparative costings of education at the separate and combined schools are calculated.

Polys attract more full-time home students

Polytechnics continue to attract increasing numbers of home full-time students on all courses apart from teacher training, against current demographic trends, according to figures released today.

Last year the 30 polytechnics attracted 41,650 first degree home enrolments up from 39,000 in 1979, an increase of about six per cent.

The Committee of Directors of Polytechnics, who produced the figures, say that with increasing enrol-

ments and falling resources, polytechnics could be forced to turn away many well-qualified applicants in future.

The GDP figures also suggest an increase of nine per cent in part-time and short courses enrolments. But in fact part-time enrolments fell by six per cent to 34,680, so that the whole increase came among the 81,000 on short courses.

One in ten full-time polytechnic students are now classified as overseas,

although as expected overseas first-year degree enrolments fell significantly by 18 per cent last year, compared with 1979.

The GDP says more than 90 per cent of all polytechnic work is now related to industry, commerce, and other vocational studies, and that higher home enrolments show increasing awareness among students of the "disincentive role of polytechnics in preparing students for professional life".

There has also been a rise in students attending advanced courses run by the Scottish Technical Education Council and Scottish Business Education Council.

The bulletin suggests that a sharp rise in 1980 of students in full-time and non-advanced sandwich courses may be the result of rising unemployment among school leavers, as there has been an overall decrease in the past four years of students on part-time non-advanced courses.

The number of overseas students on full-time and sandwich courses has

increased steadily since 1976, although numbers increased by only 10 per cent in 1980 compared to 26 per cent the year before, says the SED.

But there was a large decrease in numbers on postgraduate courses in 1980. This reverse might be partly attributable to the increases in fees for overseas students.

Overseas students now account for six per cent of students attending full-time advanced courses in Scotland, and four per cent of students on non-advanced courses.

tion and Science opts for direct control of their institutions. The conference, which includes voluntary and maintained colleges, has always favoured a body along the lines proposed in the Oakes Report.

But the call for changes in articles of government to give local authorities more direct control over their institutions has emerged as a major bone of contention for many principals. In a paper submitted to Mr Mark Carleton, the Secretary for Education, the Council of Local Education Authorities complained about management practices in some institutions and claimed that economies could be made if their proposals were enacted.

The group was set up at the DES to examine the issue but no recommendations have been forthcoming. However, the CLEA paper remains on the table and could be reviewed at any time.

The college principals already complain that interference by local authority officials obstructs them in their administrative tasks and would like controls relaxed rather than tightened.

One principal, at his last discussion of the topic, said that he could not sanction even the clearing of windows without reference to council officials.

At Leeds the vice-chancellor, Lord Boyle, has told staff the university would expect to have to make savings

of at least £5m by 1983-4 and that when he had been asked about possible redundancies he had "frankly hedged".

There will be no redundancies at the Open University this year, its vice-chancellor promises. Further threats to jobs in 1982 will be avoided through natural wastage and early retirement.

Professor John Horlock told staff that the major threat to the university's future lay in the Government's policy on fees, which were increased by 50 per cent this year. "Further increases in fee levels must inevitably reduce student numbers and jeopardise our academic and financial future," he said.

Mrs Shirley Williams, of the Social Democratic Party, said this week that the scale of the proposed run-down in universities was "massive and damagingly fast."

Union leaders regard Trafford's claimed disregard of the latest compromise on redundancy procedures as an important test case for the credibility of the national joint council on conditions of service. The NJC has agreed that authorities who have already operated the 1973/1975 agreement which gives lecturers a year's notice of redundancy should continue to operate it.

It already has the backing of the executive of the National Association of Teachers in Further and Higher Education, and endorsed last weekend by the union's annual conference, which deplored Trafford's intention to make the redundancies effective in three months.

Union leaders regard Trafford's claimed disregard of the latest compromise on redundancy procedures as an important test case for the credibility of the national joint council on conditions of service. The NJC has agreed that authorities who have already operated the 1973/1975 agreement which gives lecturers a year's notice of redundancy should continue to operate it.

It already has the backing of the executive of the National Association of Teachers in Further and Higher Education, and endorsed last weekend by the union's annual conference, which deplored Trafford's intention to make the redundancies effective in three months.

Union leaders regard Trafford's claimed disregard of the latest compromise on redundancy procedures as an important test case for the credibility of the national joint council on conditions of service. The NJC has agreed that authorities who have already operated the 1973/1975 agreement which gives lecturers a year's notice of redundancy should continue to operate it.

It already has the backing of the executive of the National Association of Teachers in Further and Higher Education, and endorsed last weekend by the union's annual conference, which deplored Trafford's intention to make the redundancies effective in three months.

Union leaders regard Trafford's claimed disregard of the latest compromise on redundancy procedures as an important test case for the credibility of the national joint council on conditions of service. The NJC has agreed that authorities who have already operated the 1973/1975 agreement which gives lecturers a year's notice of redundancy should continue to operate it.

It already has the backing of the executive of the National Association of Teachers in Further and Higher Education, and endorsed last weekend by the union's annual conference, which deplored Trafford's intention to make the redundancies effective in three months.

Union leaders regard Trafford's claimed disregard of the latest compromise on redundancy procedures as an important test case for the credibility of the national joint council on conditions of service. The NJC has agreed that authorities who have already operated the 1973/1975 agreement which gives lecturers a year's notice of redundancy should continue to operate it.

It already has the backing of the executive of the National Association of Teachers in Further and Higher Education, and endorsed last weekend by the union's annual conference, which deplored Trafford's intention to make the redundancies effective in three months.

Union leaders regard Trafford's claimed disregard of the latest compromise on redundancy procedures as an important test case for the credibility of the national joint council on conditions of service. The NJC has agreed that authorities who have already operated the 1973/1975 agreement which gives lecturers a year's notice of redundancy should continue to operate it.

It already has the backing of the executive of the National Association of Teachers in Further and Higher Education, and endorsed last weekend by the union's annual conference, which deplored Trafford's intention to make the redundancies effective in three months.

Union leaders regard Trafford's claimed disregard of the latest compromise on redundancy procedures as an important test case for the credibility of the national joint council on conditions of service. The NJC has agreed that authorities who have already operated the 1973/1975 agreement which gives lecturers a year's notice of redundancy should continue to operate it.

It already has the backing of the executive of the National Association of Teachers in Further and Higher Education, and endorsed last weekend by the union's annual conference, which deplored Trafford's intention to make the redundancies effective in three months.

Union leaders regard Trafford's claimed disregard of the latest compromise on redundancy procedures as an important test case for the credibility of the national joint council on conditions of service. The NJC has agreed that authorities who have already operated the 1973/1975 agreement which gives lecturers a year's notice of redundancy should continue to operate it.

It already has the backing of the executive of the National Association of Teachers in Further and Higher Education, and endorsed last weekend by the union's annual conference, which deplored Trafford's intention to make the redundancies effective in three months.

Union leaders regard Trafford's claimed disregard of the latest compromise on redundancy procedures as an important test case for the credibility of the national joint council on conditions of service. The NJC has agreed that authorities who have already operated the 1973/1975 agreement which gives lecturers a year's notice of redundancy should continue to operate it.

It already has the backing of the executive of the National Association of Teachers in Further and Higher Education, and endorsed last weekend by the union's annual conference, which deplored Trafford's intention to make the redundancies effective in three months.

Union leaders regard Trafford's claimed disregard of the latest compromise on redundancy procedures as an important test case for the credibility of the national joint council on conditions of service. The NJC has agreed that authorities who have already operated the 1973/1975 agreement which gives lecturers a year's notice of redundancy should continue to operate it.

It already has the backing of the executive of the National Association of Teachers in Further and Higher Education, and endorsed last weekend by the union's annual conference, which deplored Trafford's intention to make the redundancies effective in three months.

Union leaders regard Trafford's claimed disregard of the latest compromise on redundancy procedures as an important test case for the credibility of the national joint council on conditions of service. The NJC has agreed that authorities who have already operated the 1973/1975 agreement which gives lecturers a year's notice of redundancy should continue to operate it.

It already has the backing of the executive of the National Association of Teachers in Further and Higher Education, and endorsed last weekend by the union's annual conference, which deplored Trafford's intention to make the redundancies effective in three months.

Union leaders regard Trafford's claimed disregard of the latest compromise on redundancy procedures as an important test case for the credibility of the national joint council on conditions of service. The NJC has agreed that authorities who have already operated the 1973/1975 agreement which gives lecturers a year's notice of redundancy should continue to operate it.

It already has the backing of the executive of the National Association of Teachers in Further and Higher Education, and endorsed last weekend by the union's annual conference, which deplored Trafford's intention to make the redundancies effective in three months.

Union leaders regard Trafford's claimed disregard of the latest compromise on redundancy procedures as an important test case for the credibility of the national joint council on conditions of service. The NJC has agreed that authorities who have already operated the 1973/1975 agreement which gives lecturers a year's notice of redundancy should continue to operate it.

It already has the backing of the executive of the National Association of Teachers in Further and Higher Education, and endorsed last weekend by the union's annual conference, which deplored Trafford's intention to make the redundancies effective in three months.

Union leaders regard Trafford's claimed disregard of the latest compromise on redundancy procedures as an important test case for the credibility of the national joint council on conditions of service. The NJC has agreed that authorities who have already operated the 1973/1975 agreement which gives lecturers a year's notice of redundancy should continue to operate it.

It already has the backing of the executive of the National Association of Teachers in Further and Higher Education, and endorsed last weekend by the union's annual conference, which deplored Trafford's intention to make the redundancies effective in three months.

Union leaders regard Trafford's claimed disregard of the latest compromise on redundancy procedures as an important test case for the credibility of the national joint council on conditions of service. The NJC has agreed that authorities who have already operated the 1973/1975 agreement which gives lecturers a year's notice of redundancy should continue to operate it.

It already has the backing of the executive of the National Association of Teachers in Further and Higher Education, and endorsed last weekend by the union's annual conference, which deplored Trafford's intention to make the redundancies effective in three months.

Union leaders regard Trafford's claimed disregard of the latest compromise on redundancy procedures as an important test case for the credibility of the national joint council on conditions of service. The NJC has agreed that authorities who have already operated the 1973/1975 agreement which gives lecturers a year's notice of redundancy should continue to operate it.

It already has the backing of the executive of the National Association of Teachers in Further and Higher Education, and endorsed last weekend by the union's annual conference, which deplored Trafford's intention to make the redundancies effective in three months.

Union leaders regard Trafford's claimed disregard of the latest compromise on redundancy procedures as an important test case for the credibility of the national joint council on conditions of service. The NJC has agreed that authorities who have already operated the 1973/1975 agreement which gives lecturers a year's notice of redundancy should continue to operate it.

It already has the backing of the executive of the National Association of Teachers in Further and Higher Education, and endorsed last weekend by the union's annual conference, which deplored Trafford's intention to make the redundancies effective in three months.

Union leaders regard Trafford's claimed disregard of the latest compromise on redundancy procedures as an important test case for the credibility of the national joint council on conditions of service. The NJC has agreed that authorities who have already operated the 1973/1975 agreement which gives lecturers a year's notice of redundancy should continue to operate it.

It already has the backing of the executive of the National Association of Teachers in Further and Higher Education, and endorsed last weekend by the union's annual conference, which deplored Trafford's intention to make the redundancies effective in three months.

Union leaders regard Trafford's claimed disregard of the latest compromise on redundancy procedures as an important test case for the credibility of the national joint council on conditions of service. The NJC has agreed that authorities who have already operated the 1973/1975 agreement which gives lecturers a year's notice of redundancy should continue to operate it.

It already has the backing of the executive of the National Association of Teachers in Further and Higher Education, and endorsed last weekend by the union's annual conference, which deplored Trafford's intention to make the redundancies effective in three months.

Union leaders regard Trafford's claimed disregard of the latest compromise on redundancy procedures as an important test case for the credibility of the national joint council on conditions of service. The NJC has agreed that authorities who have already operated the 1973/1975 agreement which gives lecturers a year's notice of redundancy should continue to operate it.

It already has the backing of the executive of the National Association of Teachers in Further and Higher Education, and endorsed last weekend by the union's annual conference, which deplored Trafford's intention to make the redundancies effective in three months.

Union leaders regard Trafford's claimed disregard of the latest compromise on redundancy procedures as an important test case for the credibility of the national joint council on conditions of service. The NJC has agreed that authorities who have already operated the 1973/1975 agreement which gives lecturers a year's notice of redundancy should continue to operate it.

It already has the backing of the executive of the National Association of Teachers in Further and Higher Education, and endorsed last weekend by the union's annual conference, which deplored Trafford's intention to make the redundancies effective in three months.

Union leaders regard Trafford's claimed disregard of the latest compromise on redundancy procedures as an important test case for the credibility of the national joint council on conditions of service. The NJC has agreed that authorities who have already operated the 1973/1975 agreement which gives lecturers a year's notice of redundancy should continue to operate it.

It already has the backing of the executive of the National Association of Teachers in Further and Higher Education, and endorsed last weekend by the union's annual conference, which deplored Trafford's intention to make the redundancies effective in three months.

Union leaders regard Trafford's claimed disregard of the latest compromise on redundancy procedures as an important test case for the credibility of the national joint council on conditions of service. The NJC has agreed that authorities who have already operated the 1973/1975 agreement which gives lecturers a year's notice of redundancy should continue to operate it.

It already has the backing of the executive of the National Association of Teachers in Further and Higher Education, and endorsed last weekend by the union's annual conference, which deplored Trafford's intention to make the redundancies effective in three months.

Union leaders regard Trafford's claimed disregard of the latest compromise on redundancy procedures as an important test case for the credibility of the national joint council on conditions of service. The NJC has agreed that authorities who have already operated the 1973/1975 agreement which gives lecturers a year's notice of redundancy should continue to operate it.

It already has the backing of the executive of the National Association of Teachers in Further and Higher Education, and endorsed last weekend by the union's annual conference, which deplored Trafford's intention to make the redundancies effective in three months.

Union leaders regard Trafford's claimed disregard of the latest compromise on redundancy procedures as an important test case for the credibility of the national joint council on conditions of service. The NJC has agreed that authorities who have already operated the 1973/1975 agreement which gives lecturers a year's notice of redundancy should continue to operate it.

It already has the backing of the executive of the National Association of Teachers in Further and Higher Education, and endorsed last weekend by the union's annual conference, which deplored Trafford's intention to make the redundancies effective in three months.

Union leaders regard Trafford's claimed disregard of the latest compromise on redundancy procedures as an important test case for the credibility of the national joint council on conditions of service. The NJC has agreed that authorities who have already operated the 1973/1975 agreement which gives lecturers a year's notice of redundancy should continue to operate it.

It already has the backing of the executive of the National Association of Teachers in Further and Higher Education, and endorsed last weekend by the union's annual conference, which deplored Trafford's intention to make the redundancies effective in three months.

Union leaders regard Trafford's claimed disregard of the latest compromise on redundancy procedures as an important test case for the credibility of the national joint council on conditions of service. The NJC has agreed that authorities who have already operated the 1973/1975 agreement which gives lecturers a year's notice of redundancy should continue to operate it.

It already has the backing of the executive of the National Association of Teachers in Further and Higher Education, and endorsed last weekend by the union's annual conference, which deplored Trafford's intention to make the redundancies effective in three months.

Union leaders regard Trafford's claimed disregard of the latest compromise on redundancy procedures as an important test case for the credibility of the national joint council on conditions of service. The NJC has agreed that authorities who have already operated the 1973/1975 agreement which gives lecturers a year's notice of redundancy should continue to operate it.

It already has the backing of the executive of the National Association of Teachers in Further and Higher Education, and endorsed last weekend by the union's annual conference, which deplored Trafford's intention to make the redundancies effective in three months.

Union leaders regard Trafford's claimed disregard of the latest compromise on redundancy procedures as an important test case for the credibility of the national joint council on conditions of service. The NJC has agreed that authorities who have already operated the 1973/1975 agreement which gives lecturers a year's notice of redundancy should continue to operate it.

It already has the backing of the executive of the National Association of Teachers in Further and Higher Education, and endorsed last weekend by the union's annual conference, which deplored Trafford's intention to make the redundancies effective in three months.

Union leaders regard Trafford's claimed disregard of the latest compromise on redundancy procedures as an important test case for the credibility of the national joint council on conditions of service. The NJC has agreed that authorities who have already operated the 1973/1975 agreement which gives lecturers a year's notice of redundancy should continue to operate it.

It already has the backing of the executive of the National Association of Teachers in Further and Higher Education, and endorsed last weekend by the union's annual conference, which deplored Trafford's intention to make the redundancies effective in three months.

Union leaders regard Trafford's claimed disregard of the latest compromise on redundancy procedures as an important test case for the credibility of the national joint council on conditions of service. The NJC has agreed that authorities who have already operated the 1973/1975 agreement which gives lecturers a year's notice of redundancy should continue to operate it.

It already has the backing of the executive of the National Association of Teachers in Further and Higher Education, and endorsed last weekend by the union's annual conference, which deplored Trafford's intention to make the redundancies effective in three months.

Union leaders regard Trafford's claimed disregard of the latest compromise on redundancy procedures as an important test case for the credibility of the national joint council on conditions of service. The NJC has agreed that authorities who have already operated the 1973/1975 agreement which gives lecturers a year's notice of redundancy should continue to operate it.

It already has the backing of the executive of the National Association of Teachers in Further and Higher Education, and endorsed last weekend by the union's annual conference, which deplored Trafford's intention to make the redundancies effective in three months.

Union leaders regard Trafford's claimed disregard of the latest compromise on redundancy procedures as an important test case for the credibility of the national joint council on conditions of service. The NJC has agreed that authorities who have already operated the 1973/1975 agreement which gives lecturers a year's notice of redundancy should continue to operate it.

It already has the backing of the executive of the National Association of Teachers in Further and Higher Education, and endorsed last weekend by the union's annual conference, which deplored Trafford's intention to make the redundancies effective in three months.

Union leaders regard Trafford's claimed disregard of the latest compromise on redundancy procedures as an important test case for the credibility of the national joint council on conditions of service. The NJC has agreed that authorities who have already operated the 1973/1975 agreement which gives lecturers a year's notice of redundancy should continue to operate it.

It already has the backing of the executive of the National Association of Teachers in Further and Higher Education, and endorsed last weekend by the union's annual conference, which deplored Trafford's intention to make the redundancies effective in three months.

Union leaders regard Trafford's claimed disregard of the latest compromise on redundancy procedures as an important test case for the credibility of the national joint council on conditions of service. The NJC has agreed that authorities who have already operated the 1973/1975 agreement which gives lecturers a year's notice of redundancy should continue to operate it.

It already has the backing of the executive of the National Association of Teachers in Further and Higher Education, and endorsed last weekend by the union's annual conference, which deplored Trafford's intention to make the redundancies effective in three months.

Union leaders regard Trafford's claimed disregard of the latest compromise on redundancy procedures as an important test case for the credibility of the national joint council on conditions of service. The NJC has agreed that authorities who have already operated the 1973/1975 agreement which gives lecturers a year's notice of redundancy should continue to operate it.

It already has the backing of the executive of the National Association of Teachers in Further and Higher Education, and endorsed last weekend by the union's annual conference, which deplored Trafford's intention to make the redundancies effective in three months.

Union leaders regard Trafford's claimed disregard of the latest compromise on redundancy procedures as an important test case for the credibility of the national joint council on conditions of service. The NJC has agreed that authorities who have already operated the 1973/1975 agreement which gives lecturers a year's notice of redundancy should continue to operate it.

It already has the backing of the executive of the National Association of Teachers in Further and Higher Education, and endorsed last weekend by the union's annual conference, which deplored Trafford's intention to make the redundancies effective in three months.

Union leaders regard Trafford's claimed disregard of the latest compromise on redundancy procedures as an important test case for the credibility of the national joint council on conditions of service. The NJC has agreed that authorities who have already operated the 1973/1975 agreement which gives lecturers a year's notice of redundancy should continue to operate it.

It already has the backing of the executive of the National Association of Teachers in Further and Higher Education, and endorsed last weekend by the union's annual conference, which deplored Trafford's intention to make the redundancies effective in three months.

Union leaders regard Trafford's claimed disregard of the latest compromise on redundancy procedures as an important test case for the credibility of the national joint council on conditions of service. The NJC has agreed that authorities who have already operated the 1973/1975 agreement which gives lecturers a year's notice of redundancy should continue to operate it.

It already has the backing of the executive of the National Association of Teachers in Further and Higher Education, and endorsed last weekend by the union's annual conference, which deplored Trafford's intention to make the redundancies effective in three months.

Union leaders regard Trafford's claimed disregard of the latest compromise on redundancy procedures as an important test case for the credibility of the national joint council on conditions of service. The NJC has agreed that authorities who have already operated the 1973/1975 agreement which gives lecturers a year's notice of redundancy should continue to operate it.

It already has the backing of the executive of the National Association of Teachers in Further and Higher Education, and endorsed last weekend by the union's annual conference, which deplored Trafford's intention to make the redundancies effective in three months.

Union leaders regard Trafford's claimed disregard of the latest compromise on redundancy procedures as an important test case for the credibility of the national joint council on conditions of service. The NJC has agreed that authorities who have already operated the 1973/1975 agreement which gives lecturers a year's notice of redundancy should continue to operate it.

It already has the backing of the executive of the National Association of Teachers in Further and Higher Education, and endorsed last weekend by the union's annual conference, which deplored Trafford's intention to make the redundancies effective in three months.

Union leaders regard Trafford's claimed disregard of the latest compromise on redundancy procedures as an important test case for the credibility of the national joint council on conditions of service. The NJC has agreed that authorities who have already operated the 1973/1975 agreement which gives lecturers a year's notice of redundancy should continue to operate it.

It already has the backing of the executive of the National Association of Teachers in Further and Higher Education, and endorsed last weekend by the union's annual conference, which deplored Trafford's intention to make the redundancies effective in three months.

Union leaders regard Trafford's claimed disregard of the latest compromise on redundancy procedures as an important test case for the credibility of the national joint council on conditions of service. The NJC has agreed that authorities who have already operated the 1973/1975 agreement which gives lecturers a year's notice of redundancy should continue to operate it.

It already has the backing of the executive of the National Association of Teachers in Further and Higher Education, and endorsed last weekend by the union's annual conference, which deplored Trafford's intention to make the redundancies effective in three months.

Union leaders regard Trafford's claimed disregard of the latest compromise on redundancy procedures as an important test case for the credibility of the national joint council on conditions of service. The NJC has agreed that authorities who have already operated the 1973/1975 agreement which gives lecturers a year's notice of redundancy should continue to operate it.

It already has the backing of the executive of the National Association of Teachers in Further and Higher Education, and endorsed last weekend by the union's annual conference, which deplored Trafford's intention to make the redundancies effective in three months.

Union leaders regard Trafford's claimed disregard of the latest compromise on redundancy procedures as an important test case for the credibility of the national joint council on conditions of service. The NJC has agreed that authorities who have already operated the 1973/1975 agreement which gives lecturers a year's notice of redundancy should continue to operate it.

It already has the backing of the executive of the National Association of Teachers in Further and Higher Education, and endorsed last weekend by the union's annual conference, which deplored Trafford's intention to make the redundancies effective in three months.

Union leaders regard Trafford's claimed disregard of the latest compromise on redundancy procedures as an important test case for the credibility of the national joint council on conditions of service. The NJC has agreed that authorities who have already operated the 1973/1975 agreement which gives lecturers a year's notice of redundancy should continue to operate it.

It already has the backing of the executive of the National Association of Teachers in Further and Higher Education, and endorsed last weekend by the union's annual conference, which deplored Trafford's intention to make the redundancies effective in three months.

Union leaders regard Trafford's claimed disregard of the latest compromise on redundancy procedures as an important test case for the credibility of the national joint council on conditions of service. The

German firm's grant wins patent rights

There are three black fellows: Were Indian poet and playwright Derek Walcott; Elma Lewis, director of the National Centre of Afro-American Artists; and Henry Gates, assistant professor of English and director of undergraduate Afro-American studies at Yale University. And the foundation has even selected an American Indian fellow, writer and filmmaker Leslie Silko who grew up on a Pueblo Indian reservation in new Mexico and is now assistant professor of English at the University of Arizona.

A film, which had been described as "pornographic", was to have been shown to the sex education classes at OSU, but when Republican state senator Ed Moore turned up the film was withdrawn.

There are two possible explanations for the difference in style. Natfhe has a sense already passed through the stage of elementary politicization with the AUT is only now entering, while university dons are being forced to swing wildly at a still shapeless threat, Natfhe is knuckling down to some close-in defence against specific and all-too-immediate, explosively

hiv e off the main campus and the Government's plan to divert the nation's resources to higher education colleges from the need for higher education is raising fears that Natfne defections to the rival Association of Polytechnic Teachers.

All this provided a reason for being pragmatic but not, perhaps, an excuse for being dull. Natfne veterans privately complained that the leadership had stage-managed this year's debates to successfully. Contentious resolutions on the election of heads of departments, Ulster and abortion were never reached. A move to affiliate to the CIE was sunk in advance by the executive quietly taking legal advice that affiliation would violate Natfne's constitution.

"If Stanford students were to come in with strong backgrounds in languages, then we could expand cultural studies. Right now only a few students are able to use foreign languages with ease and fluency," Carol

However there is also unease about Dr Keyworth's background in weapon research. Ever since he earned his PhD from Duke University in 1968, Dr Keyworth has worked at Los Alamos, the government laboratory in New

No scientist had any influence on the revised 1982 budget.

Dr Keyworth says he has promised access to President Reagan's papers in future science budgets. However he is not expected to be an ardent advocate of the social sciences.

Natfhe will now intensify its campaign for comprehensive post-16 tertiary colleges covering vocational and non-vocational work for full and part

Clive Cookson,
North American Editor,
The Times Higher Education
Supplement,
National Press Building,
Room 541,
Washington DC 20045;
Telephone: (202) 638 6765

Overseas news

Competition for places eased

Admission to higher education in Poland will be easier this year, according to Dr Janusz Gorski, minister of science, higher education and technology. He said on Warsaw television last week, that although the number of school leavers (just under 90,000) was smaller than in 1980, the number of first-year places would remain the same as last year (almost 60,000), and could even be increased if necessary.

The most important change this year, Dr Gorski confirmed, was that the top pupils from each school will now have to take part in the entrance examinations. Until now, these young people have been exempt from the examination, although, as the interviewer pointed out, since not all schools are of the same standard, a "medium" pupil at a good school could well be more able than the "top" pupil of a second-rate school.

Jobless Danish students may lose summer benefits

from Annelise Hopson

COPENHAGEN

Thousands of students in Denmark are facing a rather lean summer vacation.

Since 1974 students who have been unable to obtain a summer job have been able to receive special social benefits. This was enforced by means of a special ministerial "summer-circular" sent to the 277 local districts well before the beginning of the holidays. This year, however, the summer-circular was not sent to the local districts because of austerity measures. There was speculation as to whether the individual social administrations might be able to help the students even without the circular.

In order to clarify the situation the department of social services in Aarhus, Jutland, sent an inquiry to the Ministry of Social Affairs and received a reply by mid-May. It said there were no provisions in the social security law to help students financially if the state educational support was not enough or if they could not find a summer job.

If the students want social benefits during the summer they have to be available on the labour market which means that they have to withdraw from

the coveted title of top boy or girl, "but those who for some reason or other were predestined for the position - a clear reference to the corruption endemic in all aspects of Polish life during the last few years. The 600 or so winners of the nationwide "olympiads" in various school subjects would, however, still be exempt from the entrance examination, and were guaranteed a place at the university of their choice.

The controversial system of awarding priority points for social origin will, said the minister remain at present. This scheme is intended to allow educationally disadvantaged young people a better place in higher education. (The postwar rebuilding of Warsaw, with the consequent mixing in the same area of families of widely different educational backgrounds provided a fruitful milieu for educational researchers who concluded, not surprisingly, that in any given school, the children of intellectual parents tended

to do better than equally intelligent children from homes where scholarship was less valued.) Priority points, said the minister, are still needed to alleviate the constant drop in the number of young people from worker and peasant backgrounds entering higher education. During the last 10 years, he said, the figure had fallen from 48 per cent to 39 per cent.

Curiously, however, as one of the interviewers pointed out, it is young people from the countryside who are particularly opposed to the scheme - although the five points for peasant origin should mean that they have a better chance of university admission. This appears to be part of the general resentment among farming families against the educational reforms of the last few years, which closed the village schools and replaced them by comprehensives with a large catchment area with no transport and often no facilities for school meals, or even time to a place to eat packed lunches.

'Illegal' union stages a two-day strike

from Annelise Hopson

COPENHAGEN

Students leaders have been divided about the wisdom of calling any type of strike at this time. In the end, they agreed on a brief "warning strike" instead of the open-handed general strike originally proposed by union president Aldo Rebelo. He said: "This decision will prove once more that students hold their discussions and reach their decisions in a democratic manner, as opposed to what the Minister of Education and General Gignere do."

While generally criticizing the symbolic strike as a "half-hearted retreat from a radical stance without support by the student mass", commentators also agreed that the strike could easily have been avoided by a little less official intransigence. For several months, union representatives had tried, in vain, to get an audience with Brazil's new education minister, General Rubem Ludwig, to submit to him a 10-point list of student demands ranging from the justifiable to the slightly unrealistic. But even unrealistic demands would no doubt have been met by the minister if he had been seen fit to receive the students.

Ludwig, upon being informed at the end of March that a delegation of student representatives was on its way to Brasilia, he had the ministry surrounded by a strong police contingent, while security forces in other cities tried to stop students from travelling by bus or plane to the nation's capital.

The union was banned in 1964, but continued functioning and conferring with Brazil's radical left. In 1968 it was finally disbanded and its few remaining leaders went underground, or abroad. With Brazil's political "opening" in the last few years, the union once more surfaced and, surprisingly, proved that in spite of the government's persistent attempts to deny its very existence, it had remained for the majority of Brazilian university students a symbol of their "supreme representation".

When General Ludwig was hurriedly called in last November to replace Eduardo Portella, a liberal intellectual, as minister of education and culture, he declared himself to be a "man of dialogue". In February, he had one of his spokesmen qualify that declaration. "The political opening is not for the students union. It is for a dialogue with the Brazilian student. We are not interested in drawing up policy initiatives. We are concerned with the student, not with the union."

But in spite of General Ludwig's splitting of ideological hairs, no one really doubts that the union is back to stay.

Radical students lose ground at Afrikaans campus

from Craig Charney

JOHANNESBURG

The winds of change are blowing among students at Stellenbosch, South Africa's leading Afrikaans university. But the ramparts of conservatism have been strengthened against them.

Last month's white general election revealed an unprecedented wave of support for the liberal opposition to the university which has provided all but one of the ruling pro-apartheid National Party's prime ministers.

But the students' representatives council has just been gerrymandered by conservatives in an effort to ensure that Verligte, or enlightened, students will never again control it.

Stellenbosch officials of the opposition party, the Progressive Federal Party (PFP) say that one-third of the Stellenbosch students who voted last month went for their party. If true, this would be almost as startling a swing as Glasgow voting in a Tory county.

The figure is probably something of an over-estimate, according to Stellenbosch political analyst Dr Hermann Gillmees. But, he adds, some 25 to 30 per cent of the student body appears "alienated" from the NP.

"That doesn't mean they all vote progressive. They're in a transitional phase," says Dr Gillmees. He agrees, however, that "PFP support on the campus has increased quite considerably in the past four to five years," perhaps doubling.

Among the reasons for the increase, he says, is the fact that the new PFP leader, Dr Fredrik van Zyl Slabbert, is



Prime Minister Mr P. Botha on winning vote a Stellenbosch old boy, highly on campus.

But the shift must also be seen in the context of changes occurring in the upper-class Afrikaans youth and intellectuals. Increasingly, they take interest in the racial accommodation policies of the affluent English-speaking opposition than in the radical policies which gave birth to the means to send them to war.

Nevertheless, the national government's support of a clear anti-Stellenbosch students, according to Francois de Bois, a leader of the Verligte student group Polin.

Saudiis embark on new plan to beat manpower crisis

by Susannah Tarbush

Saudi Arabia's manpower crisis is obsessing planners in the country as it embarks on its third five-year plan (1980-85). The catch-word is " Saudification", and the manpower issue is now so critical that a conference devoted to it was held in London recently. Entitled "Manpower and Training: Saudi Business Strategies for the 1980s", it was organised by the Middle East Economic Digest and Advanced Management Research.

Saudi Arabia's manpower problem was outlined at the conference thus: In order to translate its oil wealth into massive infrastructure projects, Saudi Arabia has been forced to admit huge numbers of foreign workers.

The foreigners range from US and European engineers, doctors and administrators, to Arab teachers and clerks, to third country nationals or "TCNs". These include Pakistanis, Indians, Thais, Sri Lankans, Filipinos and South Koreans, many working as unskilled labourers.

The Saudis feel swamped by this brew of aliens, and resent their dependence on them. They fear their effects on the political and social and moral fabric of their Islamic society which they insist must remain intact despite Saudi Arabia's rapid economic and social transformation.

The "third plan" attempts to tackle the manpower crisis. Some \$39 billion - 18.5 per cent of development spending - is to go to "human resource development", including education, training and labour and cultural affairs.

The plan aims for a growth in the workforce of only 1.2 per cent a year compared with its 7.7 per cent annual growth in the second plan. Moreover, there is to be virtually no growth in the foreign component: of the total 155,000 increase in the workforce over the five years, 146,000 will be Saudis and only 9,000 non-Saudi.

Expansion of higher education and training is a focal point of the third plan. By its end a total of 69,000 students, 59,000 of them Saudi, will be enrolled in institutions of higher education.

In the plan's last year, 23 students will graduate - more than double the number at the plan's beginning.

The emphasis will be on fields which the kingdom's need for power is most critical - engineering, science, medicine, commerce and administration. Some observers think that manpower needs alone do not dictate the emphasis on science. To believe the Saudis see large numbers of students are forming a generation threat to the status quo than a post-technocrats. The attack on the Mosque at Mecca in November 1979 said to have been spearheaded by disillusioned students of religious school Juhaimin Al-Mutah.

The Saudi authorities stand against revolutionary trends in the Arab world, and are still alarmed at the perceived communist threat of region.

The showpiece of the higher education expansion is the new university Riyadh. This should be completed by September 1985 now the \$1.7 billion Arabic version of the US-French contract for the academic area has been signed with the US-French venture of Boum International Bouygues. It is said to be the largest fixed-price construction contract awarded. The civil works will be carried out by an army of South Korean workers.

Considerable controversy has been caused in recent years by the closing of the university's grandiose plans by university president 38-year-old Mansour al-Turki. He cut projected spending from 25 billion Saudi riyals (\$7.5 billion) to 12 billion. But he denies that the number of students has been reduced, and says that there will eventually be 20,000.

The university has a medical wing and 850-bed teaching hospital King Khalid Hospital.

Ngaio Crequer discovers that the capital's latest vice chancellor believes big is not always best

Quirk's fight to keep London's morale high

For 37 days Randolph Quirk wrestled to decide whether he should take what must be one of the most unenviable jobs in the university world - the vice chancellorship of London.

It is not clear whether the temptation during the days in the wilderness was to accept or to resist but, to the visible relief of London, the Quain professor of English literature and language at University College, gave his assent.

Not that his doubt was over the need to lead it through a period of critical reconstruction which could end with a slimmer university and some ungrateful victims. His immediate concern was his research. With three colleagues in Wisconsin, one in Sweden and another the north of England, he is preparing the definitive grammar "of the most important language on earth," he says with affection rather than arrogance.

Though much of the research is done there is a writing programme which is unlikely to be finished until 1984. "I did not want the job. Not because it does not offer a marvellous challenge but the invitation could not have come at a more unfortunate time."

"But I have always regarded it as crucially important that the governance of universities should be in the hands of the most productive scholars and not in the hands of those who preferred running things to thinking things."

He certainly satisfies his own criterion. He is an internationally known and honoured scholar, assiduous in publication, a linguist admired for his breadth of knowledge.

He was educated at the Douglas High School, Isle of Man and University College, London. He served in the Royal Air Force during the war, and then taught at University College, London, then Yale, Durham and back to London, where he has been the Quain professor since 1968.

At London he chaired the academic council for three years, served on court

and has been on the councils of Queen Elizabeth, Westfield and Chelsea Colleges.

Three years ago he lost the vice chancellorship nomination by one vote to the man he now succeeds, Lord Annan, formerly also of University College.

He was one of the eight members of the committee of academic organization, chaired by Sir Peter Swinnerton-Dyer, vice-chancellor of Cambridge University, from which he has now resigned because of his new post. That committee will soon be coming forward with plans for rationalizing London.

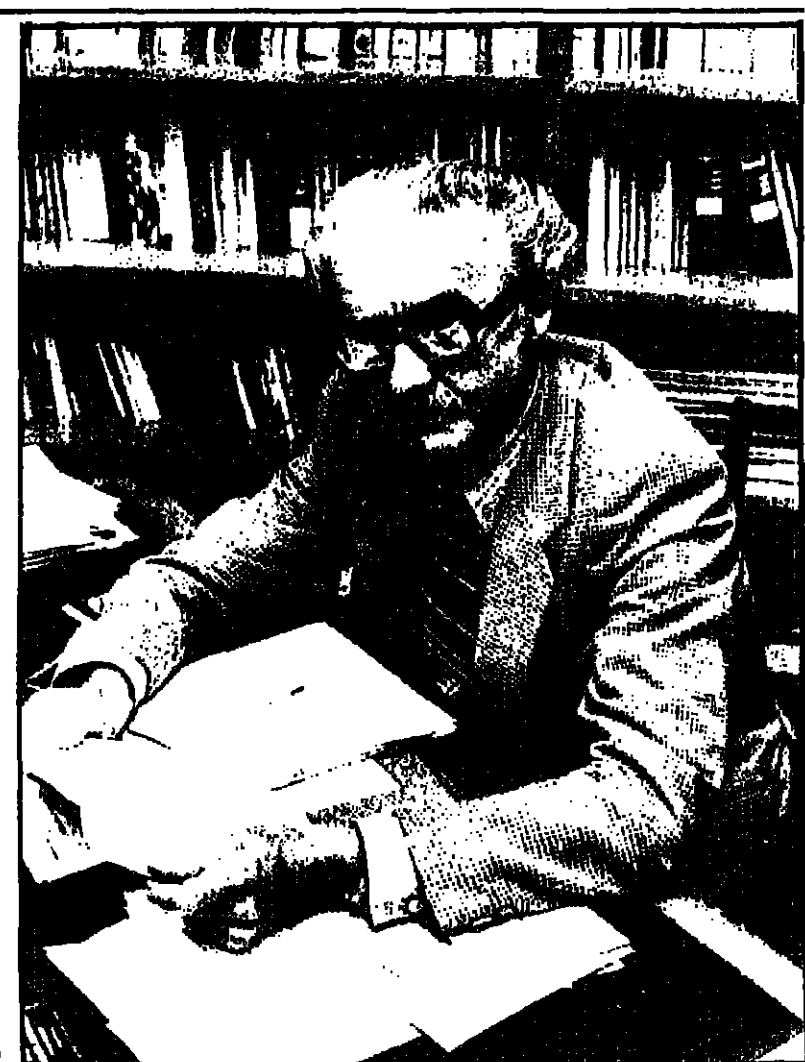
He is clear about his first task. "We have got to stop apologising for ourselves and come out fighting. We have to convince the public and the Government of the value for money they are getting and the horrifying danger of destroying what is probably the best university system in the world. We have to show the public and Government that university teachers are not stubborn shellbacks that are resistant to change in principle," he says.

One of the things he would like to remind them of is the huge transformation in the system in the 1960s. Other transformations, he says, are equally possible but the system must not be destroyed.

He was impressed by the decision of university lecturers at their council meeting in Cardiff rejecting a call by the executive to propose a freezing of post and a diversion of equipment grant money to other purposes as a means of alleviating the effect of the cuts.

"To divert equipment grant money to salaries would be to cripple our inventive, innovative laboratory work and denude our libraries," he said. The freezing of posts would also prevent fresh blood coming into the system.

"As a whole council rejected that. I thought that was really great. They



Professor Randolph Quirk puts scholarship first.

no such data exist about the polytechnics. "It would be little short of tragic if for the lack of that statistical data we were seriously to prejudice a block of institutions while leaving others with 'equal misery cuts'."

"In the absence of any neo-Robbins, I would like to look at the situation in the polytechnic and university sectors. I do not believe that this is for any other reason than despair. One has no means of comparing polytechnics and universities if you are preoccupied with unit costs."

As he says, although the UGC has built up, over the years, systematic data about departments and faculties,

There would be changes, and some of these would cause concern and discomfort. "But I reject the shallow slogan that less means worse. Our morale is high and I regard it as my foremost job to see it remains high. I want to see that there is no developmental height over this university and that we keep open the doors of our departments to good young graduates, who have far less chances now than their less good uncles fifteen years ago."

"I do not see this university as spiralling down, but spiralling up, slimmer perhaps but no less vigorous," he said.

Charlotte Barry looks at a latest social survey centre
A market research link-up

little link-up between the survey agencies and the academic world is that it has been a bit snooty about survey methods. It sees it almost as the technical side and not as an important part of substantive research.

Yet to an outsider, the institute seems identical to an academic community. It is only a stone's throw from City University with which it is closely associated. Both its co-directors and assistant director Martin Collins are honorary professors at the university where they teach survey methods part-time in the maths department and the business school.

For his own views, Dr Hoinville has brought views about the failure of the British academic community to establish good survey methods research, which he outlined at this year's Political Studies Association conference. Most of the work has been done only because a particular researcher has become involved in a methodological problem during the course of his or her substantive research, he argued.

Two coordinated programmes of methodological research stood out in the late 1950s and early 1960s. These were at the London School of Economics and the Government Social Survey, now the social survey division of the Office of Population, Censuses and Surveys. But the LSE group, headed by Professor, now Sir Claus Moser, was an academic group which did not do its own survey work. The GSS, although a highly organized machine, limited its research work to the specific projects being carried out.

In any survey agency, government or commercial, the interest in research into survey methods that individual researchers may feel is undermined by timetable pressures, client demands



and lack of funds," said Dr Hoinville.

The United States experience is totally different. In several places, notably the Institute for Survey Research at Michigan University and the National Opinion Research Center at Chicago University they manage to integrate the academic team which is free from agency/client pressures and the survey agency housing the complete range of practical skills.

In the early 1970s the SSRC tried to introduce its own survey unit, but it was closed down after its first director retired. One of its major problems was that it did not do its own surveys and academics were advising on survey methods without any direct experience.

Since the controversial closure took

small-scale work funded by an SSRC programme grant which looked at response errors arising from non-sampling sources. The six current research programmes involve looking at interviewing methods, sampling efficiency, non-response, open-ended questioning, coding methods and the editing of error classification.

It also runs a series of seminars on survey methods and is planning to expand the teaching programme carried out in conjunction with City University. The next development will be the establishment of a part-time diploma or MSc aimed at survey workers in Government and commercial agencies.

Research students in methodology will also have an opportunity to work in SSRC's survey departments and gain first-hand experience in survey methods and their application.

Dr Hoinville hopes to have a bigger impact on social science departments by giving direct advice to academics needing help in the designing and analysing of surveys.

Dr Hoinville is also aware that unlike in the United States there is no academic career structure in survey methods, which means researchers may place too much emphasis on the practical rather than the theoretical and conceptual aspects.

The Survey Methods Centre is therefore keen to collaborate with academics both in the City University and other universities and polytechnics. There are strong links already with the social survey division of OPCS and also with ISR in Michigan through Professor Graham Kalton and Professor Leslie Kish who are visiting research fellows at the centre.

Another visiting fellow is Colin O'Muircheartaigh from the LSE working on sample design efficiency. There is also close collaboration with Professor D. Holt and Professor T. M. F. Smith at Southampton University who are separately funded by the SSRC to work on survey design and analysis methods.

Overseas 'drop-out' problem

from James Hutchinson

BONN

About 25 per cent of students from developing countries who enrol at West German universities drop out after the first few terms. This has led to demands for a re-organization of courses for foreigners, and tends to strengthen the case of those university professors who claim the "best" foreign student population.

Of these about 60 per cent are classified as coming from developing countries. Almost half this proportion are from Asia and a third from Europe, but only one in ten is African and only 7.5 per cent from Latin America. The main source is along the axis, south east Europe (Greece and Turkey), the near and Middle East (chiefly Iran) and South East Asia (Indonesia), - often from countries which do not rate as typically Third World.

Recently the education ministers of the Länder tightened the regulations for the recruitment of foreign students. They decided that from next winter term only those foreigners would be enrolled who were entitled to a university place at home. Further, they

Asian social scientists cook up a recipe

Some of Asia's most eminent social scientists have called for the "indigenization" of the social sciences in the Third World.

They rejected both Western and Marxist social science in favour of their own brand in a document by the International Federation of Social Science Organizations based on discussions at a workshop in Manila in September 1979 organized by the federation and the Association of Asian

Social Science Research Councils. Indian scholar C. T. Kurien put the matter in gastronomic terms: "We sneak under many a (Western) academic table to gather the crumbs under them. And we mix these bits and make a hash which we pretend to relish, but which we hardly digest. We have hardly made a contribution to academic cuisine, and have thought it impossible to prepare a dish of our own with a recipe we have made, using ingredients we have."

Is the 24-hour day really such a wild dream?

In the first article in an occasional series on the state of research in controversial areas of science, Robin McKie reports on recent work on sleep.

Sleep, the "chief nourisher of life's feast" according to Macbeth, has for centuries been viewed as a time of replenishment, a period when our minds and bodies can be restored after the efforts and tribulations of the day. It was a belief reinforced in the twentieth century by the first psychologists, Freud among them, who considered dreams to be the protectors of sleep which itself had a vital role to play in supporting full mental activity. On the other hand, Jung believed it was a time when our minds could be in communication with the collective unconscious, the store of racial and family memories deep within our brains.

These views are decidedly difficult to substantiate, and it was not until the mid-1960s that attempts to understand the nature of sleep could be put on anything like a proper scientific basis. It began at Chicago University, where Professor Nathaniel Kleitman, together with colleagues Eugene Aserinsky and William Dement, found that approximately every 90 minutes during sleep volunteer subjects had brief periods of rapid eye movements (REMs).

When asked during these periods, the subjects reported vivid eventful dreams, but when woken during the other periods they often reported no dreams or only vague recollections of abstract thoughts. For scientists it was a crucial breakthrough for it allowed



them to introduce a host of variables into experiments - and note the effect on subjects' dreams and sleep.

Within a few years, a strong collection of findings indicated that indeed the paradoxical sleep - as the REM or dream periods were known - was critical to health. Deprived of dreams by being woken as soon as REM began, subjects would compensate the next night with increased periods in paradoxical sleep. If further deprived, they would hallucinate and complain of irrational fears and when taken to its extreme, in the case of experiments on cats, would die.

Surely then paradoxical sleep played a vital role in the work of the brain. The psychologist Dr Christopher Evans suggested it was a time when the human computer went "off-line" and analysed and interpreted the mass of data and stimuli which poured through our eyes, ears, and other sense organs during the day.

Dreams, according to this theory, were merely the brain's attempts to interpret the computer-like processing of information that was going on in the sleeping mind. As evidence for this theory, Dr Evans pointed to the fact that newly-born babies spend up to 16 hours asleep, half of which is in paradoxical sleep, while adults only spend 20 per cent of their eight hours in this state. These long periods are needed so that the babies' brains can interpret the flood of new stimuli pouring in from the outside world.

But it was at Edinburgh University's department of psychiatry that much of the important and influential British

work on sleep and dreams was carried out by Professor Ian Oswald and his research team. Professor Oswald was particularly concerned about the effects of various drugs - such as barbiturates which are supposed to help sleep - on the quality and type of sleep in various people.

He found that paradoxical sleep was suppressed by many drugs, with a corresponding rebound period when there was a massive increase in paradoxical sleep when the drug-taking stopped. This compensation period lasted roughly eight weeks, which approximates to the time required for repair to brain cells.

From this, and other work, Professor Oswald concluded that paradoxical sleep was a time when the brain grows and renews itself by means of protein synthesis. When drugs are taken this interrupts this process and a full two months are needed to return to normal. Professor Oswald's theory also explains large amounts of paradoxical sleep in babies - for they are young with growing brains that require a great deal of protein synthesis for cell manufacture.

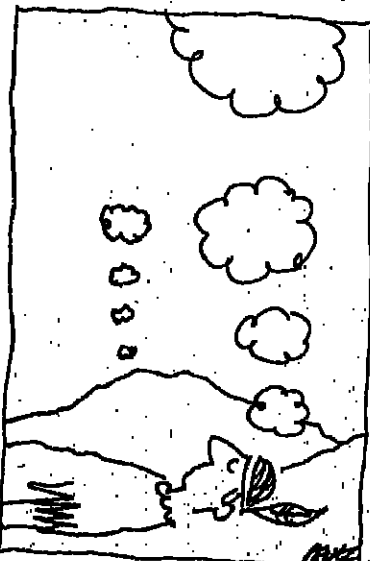
On the other hand deep orthodox sleep - those periods when there are no rapid eye movements and the brain waves, measured by electroencephalograms (EEG), are large and slow - is a time associated with the restoration in many body tissues. Professor Oswald believes, as evidence, he points out that human growth hormone, important for tissue growth, protein and RNA synthesis and red blood cell formation, is secreted during deep stages of orthodox sleep. Similarly athletes taking extra exercise have more deep orthodox sleep and more physical effort during the day for non-athletes causes more secretion of growth hormone during the night.

However, recent work has forced Oswald to reject the first part of his theory. Blood flowing to the brain increases during paradoxical sleep which would prevent high levels of protein synthesis there.

Instead he now believes that both types of sleep are important for body tissue restoration. "In paradoxical sleep the muscles are flaccid and therefore paradoxical sleep is the time of maximal rest for the muscles which carry the body weight around all day", Professor Oswald stated in a recent paper.

Yet this view, together with all the other theories which attempt to explain why we spend almost a third of our lives in an unconscious state occasionally interrupted by bizarre hallucinatory experiences, have a common thread - they all stress that we need to sleep. It is a principle recently challenged by a self-confessed heretic in the world of British sleep research - Dr Ray Meddis, of the department of human sciences at Loughborough University.

He points out that although certain hormone secretions and other processes take place during specific types of sleep, this does not mean sleep is



necessary for them to take place. Instead he adopts the extreme position of arguing that sleep is a mere evolutionary hangover, a period of selective advantage in humans when they could lie in quiet well protected places, not about in the dark at risk of death from wild animals, and could conserve energy.

"Our sleep instinct was originally tailored for men who had a rather different life style from the one enjoyed today," Dr Meddis states in his recent book, *The Sleep Instinct* (Routledge and Kegan Paul, £5.50). "However, sleep may no longer be necessary in modern, civilized, opulent man".

If one looks at other animals, it can be seen there are great differences between sleeping times for different species - from two hours a day for roe deer and horses, to 20 hours a day for giant sloths! The differences are a reflection of the security of their environments, Dr Meddis maintains.

He explains the lengthy sleep periods of babies as being due to their need to prevent exhaustion in their mothers and points to examples of "nonsomnics" who sleep less than an hour a day as proof that sleep is far from being critical for good health.

"There is no direct evidence to support the belief that sleep has any direct association with restorative processes of any kind". Sleep deprivation merely causes loss of motivation for various tasks until one is compelled to drooze.

Instead, he proposes that the two different types of sleep observed in man are the by-products of our evolutionary past. Paradoxical sleep is the remnant of the brief sleep periods of our reptilian ancestors which had to be supplanted with orthodox sleep periods because the body is capable of greater temperature control then. One explains large amounts of paradoxical sleep in infants because in the womb they have little need to control their own body temperatures.

There are many details in his theory which Dr Meddis acknowledges are "only guesses based upon incomplete evidence". Nevertheless his view is that those scientists who stress the restorative function of sleep and dreams must prove their cases much more conclusively than at present. It is insufficient to point out the different bodily and mental functions of sleep. It must be proved that sleep is necessary for them to occur at all and that they cannot take place in a body kept awake.

In his turn, Professor Oswald acknowledges that sleep has an evolutionary origin. However, over the course of history, it has also become a time when the processes of bodily restoration take place and are now locked together.

Although, Dr Meddis and Professor Oswald do not consider each other to be completely poles apart in the sleep debate, they nevertheless represent two distinct camps in the argument over the value of sleep.

In between there are a range of different views and opinions as well as different approaches to research. One of the most unusual has been taken by Dr Keith Hearn, at Hull University, who is currently investigating the phenomena known as lucid dreams - those to which we are aware of actually dreaming.

Although Dr Hearn subscribes to

the idea that sleep may only be an evolutionary hangover, he has developed the concept of lucid dreams which he believes may be used as a psychological aid. He has built a version of a dream machine, shortly to be manufactured commercially, which will use a detector, clipped to the nose, to measure breathing rates and then trigger lucid dreams at the critical point in paradoxical sleep. This is done by emitting a stream of 150-volt, low ampere pulses that travel through wires to the dreamer's wrist.

"These pulses then fit into the subject's dream," Dr Hearn explained. "The person realizes they are a signal for him to start lucid dreaming, yet it is done so he is not awakened".

"Once in a lucid dream, one will be able to dream up people you know or use the dreams as a short cut to creativity for writers, artists and composers".



However, Dr Hearn's work is more of a diversion than other research projects. More in the mainstream, is Dr Andrew Tilley, of the Medical Research Council's applied psychology unit at Cambridge, who claims that he sits on the fence in the "restorative versus evolutionary" debate.

His work has been particularly concerned on testing the idea that paradoxical sleep is necessary, or at least important, in the consolidation of memories of the previous day's events.



While at Hull University, he conducted experiments with his former colleague, Dr J. A. C. Empson, on two sets of subjects who in successive nights were given separate short stories to remember.

It was found that those deprived of paradoxical sleep were significantly inferior at recalling the presented stories when compared to those deprived of deep orthodox sleep. In a paper in *Biological Psychology*, they conclude that their work supports the idea that paradoxical sleep is necessary "for the long-term fixation of memory traces".

Yet there are flaws in this interpretation, Dr Tilley now acknowledges. The failure to properly recall events after being deprived of paradoxical sleep may be due to a breakdown in efficient memory recall, not in the actual storage of memories.

To test this, Dr Tilley asked subjects to categorize various objects or words flashed on a television screen. The speed with which they did so was then measured. "True enough, it was found that people took longer to categorize familiar objects, a process which depends on retrieving well established memory traces, if they were deprived of sleep."

It is a finding that somewhat complicates the picture and although his work spurred him on to find final proof that sleep periods were vital to memory consolidation, in which new learning could be integrated with old while, Dr Tilley remains to be convinced of his theory after six years' hard experimental work.

"While I tend to sit on the fence between evolutionary versus biochemical arguments, if you asked me which side I would probably fall on, I suppose it would have to be on the side of the evolutionists. Certainly, yet the heretics of restorative sleep still have to come up with convincing evidence".

"When sleep research got off the ground in the 1960s, people were very enthusiastic about what might be found. Now they are very disillusioned for we have not really discovered very much more than we knew then."

"It is for this reason that sleep research has gone off at various tangents. Very little is now being done in Britain and in America it has increasingly concentrated on potentially lucrative fields of research into treatments for rare sleep disorders".

This slight jaundiced view is backed by Professor W. P. Colquhoun, of Sussex University, whose research is particularly concerned with human performances such as memory and concentration which vary over 24 hours and which have importance for those designing night shifts and work rotas that interrupt normal sleep patterns.

"There has to be a climate of interest in research for it to continue and to generate funding yet there is a real lack of interest in this country. Yet the performances of night shift workers could save millions of pounds in industrial terms".

It is a good point. Sleep takes up a great deal of our lives - yet many British scientists believe we have still learned very little about it that is new. Given that sleep disruption, from insomnia to night shift work, causes misery for many thousands of people, this must cause concern.

Similarly, an awareness of its exact function would lead to new understandings of the working of the brain. Although there have been promising breakthroughs there is no consensus about their interpretation. Much needs to be done, although there is little sign of this occurring in the near future. The dream, it seems, is fading.



HIGHER EDUCATION AND THE LABOUR MARKET

The first Leverhulme seminar was held in Sussex two weeks ago. Discussion was based on four specially commissioned papers, which are summarized on pages 10 and 11. They will be published in full by the Society for Research into Higher Education.

The seminar was the beginning of a cycle of meetings funded by the Leverhulme Trust which will culminate in 1982 with a major report on British higher education policy. The second meeting, on demand and access, will be held in Edinburgh at the end of June.

A total of seven seminars on specialist topics is planned, followed by a review meeting under Lord Scarman at which the final report will be discussed. The programme is directed by Professor Gareth Williams, of Lancaster University.



No voting, no quoting, just noting, as convention is observed

by Peter David

To encourage the provocative and protect the heretical, discussions at the Isle of Thorns were held under the "Chatham House convention" which prevents direct reporting. In the event it was hardly necessary. Arguments ranged less around sensitive government policy issues like manpower planning and the broad issue of whether employers could find the graduates they needed and how one could tell if they didn't.

Among the economists there was general agreement that the market for graduates worked surprisingly efficiently given its peculiarities as a market. On the supply side the higher education system did not regard itself primarily as a supplier of employees. The output of the system was determined largely by such maverick variables as student choice and the predilections of teachers. On the demand side, the variety of employers sent through the market - such as changes and salary levels - were subject to three or four year time lags.

In spite of this, there was little evidence of significant graduate unemployment or important skill shortages. The danger, the economists agreed, lay in the future, when the end of full employment and continuous growth began to have an impact on graduate recruitment.

But there was considerable disagreement about whether the market could not be made to perform even better by some further intervention. On one side some participants argued that there were neither the tools to implement nor the evidence to warrant such an approach. On the other was a strong, but largely intuitive conviction that the market was on the verge of going awry. "If it's all so fine, how come we ain't rich?" asked one agnostic.

The strongest case for non-intervention came from a civil service economist, who argued that the complaints employers made about their graduate recruits should be treated with scepticism - grumbles were always to be expected and seldom squared with objective evidence.

Apparent skill mismatches were often dealt with by "substitution" from adjacent disciplines, he said. Physicists, mathematicians and engineers formed a spectrum of graduates cap-

able of filling a large number of common jobs. Most evidence of market failure came from engineering, which was specially sensitive to fluctuations in economic activity: the overwhelming evidence was of employers using salaries to send out market signals which were efficiently picked up by students entering higher education.

The interventionists responded by arguing that the market was working but could be made to work a lot better by relatively small adjustments at the margin. Warning against complacency, a former industrialist pointed out that the use of substitution to make up for skill shortages had produced damaging distortions in British manufacturing.

We had successfully used scientists to do what other countries would describe as engineering tasks, he said, but at the extremes of engineering, like design, industry had suffered from the intellectual weaknesses of the universities. "The management stream has been well served by the universities, but there are specialist areas where the skill shortages are serious."

But how well could intervention be organized, even if the case for improving the market were accepted? Em-

ployers at the seminar held out little hope of industry articulating its graduate requirements precisely. One very large employer said his organization recruited graduates for 12 functions, but in only three of them was the graduate's discipline of prime importance. Another said that except in very specific functions, like finance, it was simply impossible to pin up to five years ahead. "So we depend on people who have a built-in flexibility as a result of the courses they follow."

Theoretically, the inability of employers to pinpoint their requirements in advance, and the time lags built into the degree system, could be compensated for by large scale investment in continuing education. But even this solution had its detractors. The economists pointed out that continuing education entailed extremely high costs which could be justified only if the returns were commensurate. And at least one employer frankly admitted that older recruits could not easily be accommodated in the promotion structure of most large firms.

Heavily, perhaps, the final stages of the seminar turned to discussions about "the British disease" and com-

'You have to hold your nose and jump'

by Peter Scott

The first Leverhulme seminar, appropriately enough on higher education and the labour market, the nearest thing to an active policy issue at a sterile and negative time for the development of the system, was an occasion for academic herbivores rather than policy carnivores.

The four expert papers and the two days of discussion which they provoked served not to reveal startlingly new and radical policy possibilities but to emphasize once more the ambiguity and the complexity of the relationship between higher education and later employment. The seminar, held at Sussex University's Isle of Thorns conference centre on the edge of Ashdown Forest, produced no red-raw initiatives; instead it provided another necessary opportunity for patient rumination.

This perhaps limited outcome was neither the fault nor the intention of the 36 participants. In fact academic experts in labour economics were probably underrepresented. The majority was made up of Berills and Birds, not of Blaugs and Layards. Industry was also well represented as it could be at such an occasion. The chairman of the seminar was Sir Michael Chapman of Lloyds Bank, and Sir Adrian Cadbury of Cadbury-Schweppes was an active participant.

Only on two brief occasions did the labour economists threaten to take over the seminar with "how many angels can dance on the head of a pin" style speculation. The first was when the discussion became mired in a rather crusty debate about whether substitution of skills and qualifications (and other symptoms of flexibility within the labour market), and the absence of yawning and shifting starting salary differentials so typical of the United States, were evidence of market "success" or of market "failure".

The second was a lively discussion, but ultimately one as unilluminating for immediate policy, about rival views of higher education as a creator of human capital or as a filtering mechanism ("positional goods") having become a favourite intellectual toy since Fred Hirsch's *Social Limits to Growth*, and the one perhaps too cynically and readily applied to higher education as it tumbles in public esteem.

The real trouble, if that is the correct word, was the intractability of the subject. At the end of the seminar it had become clearer why manpower planning had so often been the motif of Government policy towards higher education but had nearly always failed to achieve any lasting or substantial effect.

For a start, although a majority of

those at the seminar clearly felt that the labour market for highly qualified manpower could be made to work better, there was a surprising reluctance to over-criticize its present performance. Paradoxically this reluctance was more marked among the industrialists, who warned that industry's needs could not always be easily deduced from what it said it wanted, than among the academics who clearly felt under pressure to be hard-headed.

Even this rather tentative consensus began to dissolve when the seminar came to consider how the messages of the market, once they had been satisfactorily defined, could be translated into effective action within higher education. Everyone could agree about the need for better information (nice and easy); everyone could also agree about the need to keep options open for longer for young people, principally through the medium of a liberalized examinations system and thinks like Diplomas (nice and difficult); everyone could agree about the crucial importance of continuing education in enhancing job flexibility (nice and expensive). And it was at this point that the civil servants started very politely to lose their patience.

Later in the seminar this sweet but tentative rationality was succeeded by two favourite British fetishes, the exciting contemplation of disaster and the artificial stimulation of divisions. Having heard from Richard Freeman of Harvard about college bankruptcies, tumbling academic salaries, and cut-throat competition for students, everyone became quite excited and pessimistic at the same time.

Finally in the last session academic caution was abandoned. Instead the seminar was dominated (despite the feeble protests of a silent majority) into two camps. The Stalinoid central planners with Tessa Blackstone is an extremely reluctant champion, and the "de-centralizers" (whether in the SDP or Hayekian mode was unclear) led more enthusiastically by Maurice Peston. But even this rather forced dichotomy broke down when most people refused to "vote".

So to the very end and the output of the seminar remained as opaque as the output of higher education which was its subject. Was the proper conclusion that nothing much needed to be done because the market was working reasonably well given the diffuse mission of higher education, or that nothing much could be done because of the inflexibility and strength of established interests? One participant said, of the labour market: "You just have to hold your nose and jump." A convenient epitaph on the seminar itself, perhaps.

Leader back page

HIGHER EDUCATION AND THE LABOUR MARKET

American universities and colleges should compress four-year first degrees into three years, so lowering the real cost of higher education to students and raising demand, Professor Richard Freeman of Harvard University, author of the controversial book *Overeducated America*, argued in his paper to the seminar.

This reduction would lead to a considerable saving of forgone income at no serious loss of educational quality. With more intensive academic years students would lose the income from four summers of low-paid work, and gain one year of much better paid work as a graduate.

Professor Freeman added: "While in the past the desire for summer leisure may have made a concentrated course of studies attractive to only a few, in the changed market more students are likely to find this option desirable."

He suggested two other strategies to cope with the crisis of declining enrolments. The first was to link liberal arts with vocational courses to bring more blue-collar workers into higher education.

The second strategy was to modify tuition fees to reflect the real costs of different courses. Professor Freeman told the seminar: "Graduate programmes are often subsidized by undergraduate tuition, suggesting that graduate tuition is too low."

"Such changes will tend to limit graduate enrolments, an effect that is not inconsistent with the anticipated lower demand for PhDs in many areas. If such price changes are not possible, it may be desirable to limit certain graduate programmes even beyond the size determined by student choice."

Professor Freeman also suggested that American higher education might try to make up for lower home demand by recruiting more students from overseas, particularly from the newly rich oil countries and countries like Mexico and Brazil where local universities would not be able to cope with rising student demand.

The most important reason in his judgment for this crisis of demand was the sharply declining value of a college degree in the job market since 1970. Although this decline had begun to level off at the end of the decade, the value of four years of college measured as a rate of return had fallen from 11 per cent to 7 per cent over the last ten years.

The relative earnings of new college graduates had been substantially reduced since 1970 and many had been forced to take jobs not normally requiring a college education. The starting salary of a college graduate had fallen from 124 per cent of average earnings in 1969 to only 105 per cent in 1978. During the same period the earnings of a new PhD had declined from 218 per cent of average earnings to 187 per cent.

According to Professor Freeman's paper a parallel trend to the fall in relative earnings was the growing tendency for graduates to be forced to

take non-graduate jobs. In 1969 61 per cent of men with four years of college and 81 per cent of women were in professional jobs. Ten years later this proportion had slumped in the case of men to just over 50 per cent and to 65 per cent in the case of women, indicating that many new graduates had been forced into lower level jobs.

Both trends had come together to produce a marked fall in the rate of return on college education. Tuition fees, Professor Freeman explained, had roughly kept pace with inflation, a little below in the case of public colleges, a little above in the case of private colleges. But the average salary differential between a young college graduate and a high school graduate had been cut by 40, with the former experiencing an average loss of 15 per cent in real earnings.

"One of the basic features of the declining college market of the 1970s and the vasty different experience of diverse fields," added Professor Freeman. "The pattern has been for exceptional decline in academic and research fields in contrast to modest decline or increases in business-oriented occupations like business, engineering, and medicine."

Humanities and social science graduates saw their starting salary decline by 20 per cent in real terms between 1970 and 1975 and by a further 11 per cent between 1975 and 1981. In contrast the engineers experienced a decline of only 7 per cent in the first period and registered an actual gain of 3 per cent over the last six years. The result has been a remarkable widening of differentials. In 1969 an engineering graduate could expect to earn 123 per cent more than a humanities or social science graduate; now the gap has increased almost three times to 64 per cent more.

Professor Freeman claimed that the declining value of degrees has had an immediate and a sharp impact on the attractiveness of higher education. "What stands out in the data is the sudden sharp fall in the relative number of male college students which began in 1969 when the labour market turned down after more than a decade of substantial increases," he argued in his paper.

This sharp decline was confined to male high school leavers. In 1968 63 per cent had decided to go on to college; five years later this proportion had slumped to 49 per cent. With women the story was different, with female students increasing as a proportion of college students as the men defected and remaining roughly stable in number. Professor Freeman argued that as the data on incomes suggested that the value of a college degree for women did not decline as sharply as for men this differential response was to be expected.

Surprisingly the slump seemed to be spread fairly equally across all social classes rather than being concentrated among school leavers from working class homes. Indeed Professor Freeman

commented: "The fall in enrolments from the middle and upper class represents a major change in the traditional pattern of intergenerational mobility; for the first time large numbers of young persons appeared likely to obtain less schooling and potentially lower occupational status than their parents."

Within this general decline in demand there were wide variations. The number of first degrees awarded in history fell from over 55,000 in 1970/71 to less than 25,000 towards the end of the 1970s. The number of first-year students in engineering in contrast rose from 52,000 in 1973 to almost 110,000 in 1980, and is still rising sharply.

This decline in the rate of return on higher education, and the consequent decline in demand, had forced American institutions into harsh readjustments. A few, mainly private two-year colleges, had been forced to close, and a significant number of other institutions - 30 universities, 803 four-year colleges and 427 two-year colleges - had been running deficits suggesting to Professor Freeman that many more institutions might be forced to close over the next few years.

However, the main burden of retrenchment appeared to have fallen on the career prospects of aspiring academics and on the general level of academic salaries. The effect on the former had been disastrous. In 1968 only 6 per cent of new PhDs could not find jobs; ten years later it had risen to 26 per cent.

Another indication of the inability of higher education to employ new PhD holders was the percentage of faculty members with seven or less years since the award of their doctorates. This fell from more than 42 per cent in 1968 to less than 30 per cent six years later, an important indication of an aging faculty.

The effect of dwindling demand on academic salary levels was almost as dramatic. Although the average salary rose in money terms from \$11,033 in 1967/68 to \$20,120 in 1978/79, and increase of over 82 per cent, when inflation was taken into account a very different picture emerged.

In constant prices the average academic salary fell from \$11,033 to \$9,990, which meant that at the end of the decade the average faculty member was only being paid 90 per cent of what

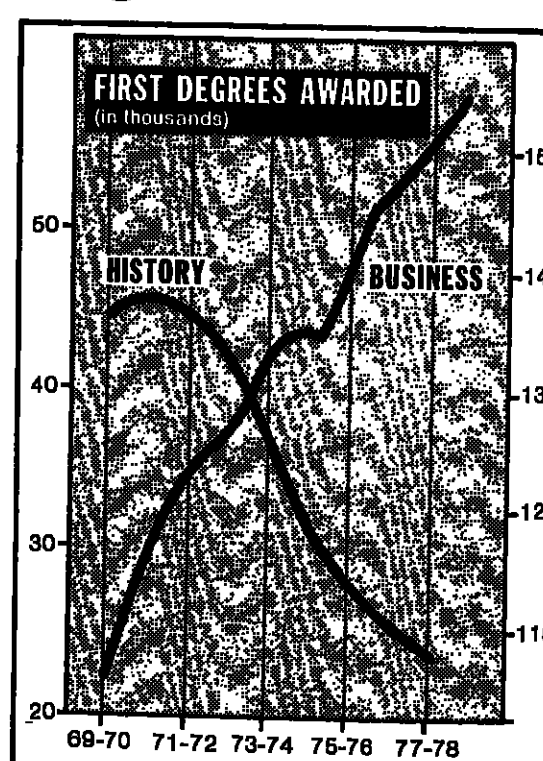
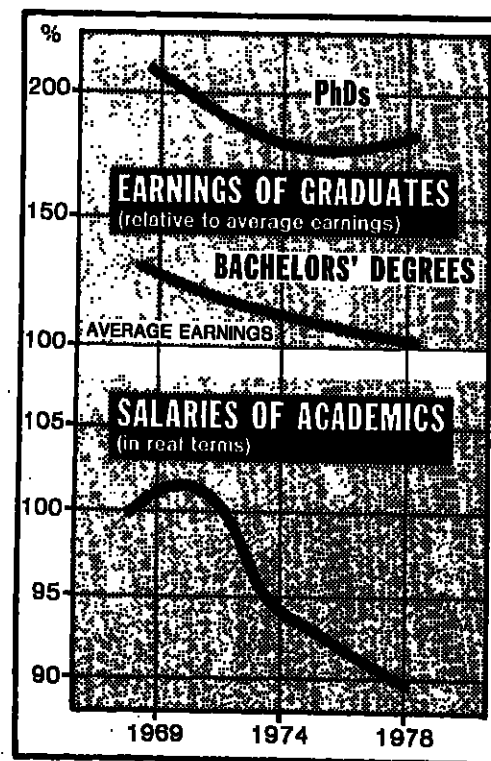
he would have been paid at the end of the 1960s.

Other adjustments which American colleges have made to the changing markets were more spectacular and bizarre. Professor Freeman detailed the explosion of marketing, often of an uninhibited character to bring more students into institutions. A new quarterly journal, *The Higher Education Marketing Journal*, had even been established to act as a focus for this growing activity.

He added: "While apparently still rare, the tactic of bounty hunting has appeared, with recruiters paid on the basis of the number of students 'delivered'. The job of admission officers, particularly at weaker institutions, is no longer to weed out unsuitable applicants but to find warm bodies."

But Professor Freeman's conclusion was sceptical. Despite all the marketing efforts it appeared from the data that they had only a slight effect on demand for higher education, he said. In the face of the economic reality of declining return it was difficult to see how such adjustments could have more than a marginal impact.

The shape of things to come?



Will Britain follow in the 1980s where America has led in the 1970s? Even for those who believe that the experience of higher education in the United States is to be avoided as a model for development rather than regarded as an aug-

ury of the future here, the facts are both fascinating and sobering.

Within a static or declining total number of students there has been a wild swing against the arts and the

social sciences and an equally wild swing towards business and engineering. This has gone hand in hand with a slump in the value of a college degree in the market place and a significant erosion of academic salaries.

No shortage of engineers but supply is tight

employment of such workers was still left unanswered. Dr Bosworth continued: "The Finlinton report emphasizes the growing evidence of the importance of quality rather than price competition. Clearly to compete effectively Britain requires to build a strong technological base, not only in terms of product performance but also productivity."

Nevertheless such an argument in his view was not sufficient grounds for justifying Government intervention. It had also to be shown that the outcome resulting from employers acting in their own interests differed from (and was inferior to) the outcome that could be achieved in the national interest.

Dr Bosworth believed that such a case could be made but it had to go beyond simply arguing that we needed a strong technological base and so engineers. After all, increasing the supply of manpower did not ensure they should find jobs (unless it was believed that supply could create its own demand) and there would be no positive spin-offs from a larger group of unemployed technologists.

A more realistic case could be made

on the grounds that industry's demand for technologists was related to output and profit levels. The latter was particularly important because it was the source of the money for expanding such employment. But profits were particularly susceptible to short-term fluctuations. It did not appear ideal that long-term investment, whether in highly skilled manpower or R and D, should be funded from sources subject to major short-term movements.

Dr Bosworth commented: "One reason for intervention, therefore, might be to de-stigmatize these key functional activities in order to reap the potentially much larger rewards that might be expected from a more stable investment programme."

Private firms had little economic choice but to respond to short-term movements of markets. But it was not clear that the same constraint applied to the Government. At a time of recession there were grounds for singling out by Government, but this was not inconsistent with making wise investments for the future. However, there was no balancing or counter-cyclical element in the Government's investment record. Rather prestige

projects undertaken for political reasons often added a further and almost wholly capricious dimension to the labour market for engineers and technologists.

Dr Bosworth also found that many engineers and technologists were employed in occupations and functions where they made little, if any, use of their formal science or engineering education. "This may reflect a misallocation of resources as such knowledge is extremely costly to impart given the relatively capital intensive nature of education in these subject areas," he added.

"One possibility might be that, in addition to extending the education of engineers in non-science and engineering subjects, it might be possible to give individuals who are training in non-science areas a greater element of science and technology subjects."

However even when engineers and technologists did enter appropriate employment, there seemed to be a dichotomy between the academic knowledge they received and the skills and knowledge they required for their jobs. The obvious response was for the education system to provide "general"

training which would be topped up by "specific" training by the employer.

"Employers both in their attitude towards a higher vocational element in education and in their expenditure on post-graduation training, seem to be indicating that there is something of a divorce between the nature of the product the education system supplies and the product they wish to purchase," said Dr Bosworth.

Employers were using the education system as a screening device to search for the most able candidates, a very expensive filter from society's point of view. This interpretation was supported by the contradiction in the behaviour of employers: they called for an increased practical element in courses and yet preferred to recruit the most academically able students who usually were found in the least vocational courses.

Dr Bosworth also emphasized the importance of continuing education. Particular attention might have to be paid to retraining scientists as engineers if a shortage of the latter occurred when the economy moved out of recession.

He added: "Human capital (i.e. the embodied stock of skill and knowledge) is not different to physical capital in the sense that, unless it is maintained and refurbished, it becomes obsolete. Continuing education is therefore essential."

Professor Peston's alternative



'Human capital' uninvested

In a paper reviewing theories about higher education and the labour market, Professor Maurice Peston of Queen Mary College, London, warned that there were methodological and ideological problems. Education policy - itself a complex phenomenon operating at a variety of levels - had to be placed within the broader context of macroeconomic policy. And manpower planning was a controversial issue because it questioned the efficiency of the free market.

Turning to the nature of the labour market, the paper pointed out that it was not purely competitive; determined partly by the interplay of powerful trade union and employer pressures, or by notions of "fair comparisons". In the case of highly qualified personnel there were a number of extra market imperfections. For one thing, it was possible that graduate pay was determined as much by custom as by the market, and could remain above market levels for long periods of time.

Under the "human capital" approach to the question, now in decline after being popular in the 1960s and 1970s, education was seen as an investment in a person yielding a flow of returns. An alternative view - the "screening" hypothesis - sees employers using education as a filter for a variety of personal qualities which are otherwise difficult to locate.

"The human capital approach viewed as positive economics offers a coherent theory which throws light on a number of aspects of the demand for higher education. In practice in a country such as the United Kingdom it throws somewhat rather less light on the supply side. An alternative theory such as the screening approach also offers useful insight, and the two theories can be made to complement each other."

"Unfortunately, when it comes to empirical testing the position is a great deal less clear. While it is too much to say that the theories have been refuted, they are not so well substantiated as to suggest that a more common-sensical, less formal theoretical approach has been decisively refuted."

"To a considerable extent all we are discussing here is the broad use of mainstream economics in the analysis of educational decisions, whether this is to do with costs and benefits as flows over time or decisions in conditions of uncertainty. It may be expected that economics will be not less helpful here than elsewhere, but it can hardly be expected that difficulties not surmounted in the study of private industry will disappear in the more complicated area of public sector institutions."

It would be wrong to suggest that the

A fine balance of supply and demand

There were four special reasons for reviewing the demand for graduate employees, according to Professor Laurence Hunter, of Glasgow University's Department of Social and Economic Research. In a 73-page paper commissioned for the seminar he pointed out that the Robbins projections ran out in the early 1980s; that the country was being plunged into recession; that demography was about to cut the size of the 18-22 age group and that there had been mounting criticism from employers about the performance of the higher education system.

Higher education had expanded considerably since Robbins but its development had been determined largely by student choice of courses. "It is here that many would argue the present difficulties of the higher education system have their origin. For unless we make strong assumptions about the relation between employers' demand for highly qualified manpower and the pattern of course selection by entrants to the system... there is a distinct risk that the market for graduate manpower will experience shortages in some sectors and surpluses elsewhere."

Underlying the patterns of graduate employment, economists would argue, there must be a recognizable market mechanism. Its supply side consisted of investment (both social and personal) in education - from which returns could be expected and measured. "We can, therefore, hypothesize a market mechanism which, through alterations in wage and salary offers in different occupations, encourages adjustments in occupational choice and decision about alternative types of education."

On the demand side, employers were recruiting highly educated manpower to specialist positions or management posts. Most of this recruitment would involve hiring suitably qualified people who would nevertheless need more training. The relatively high cost of this sort of manpower, and the need to provide more training, made hiring decisions particularly risky. So employers tended to "screen" applicants for attributes other than their qualifications. This introduced a special complication into the working of the market, as did the existence within companies of an "internal labour market" which tended to insulate graduates entering management hierarchies from the external market.

Turning from the theory of the graduate labour market to an analysis of employment trends, Professor Hunter pointed out that between 1966/67 and 1978/79 the total student population increased by nearly 30 per cent. But there were important variations in the growth of particular subject areas. In the late 1970s, for example, the numbers taking education courses actually declined. All other subjects increased, but technology and engineering lagged behind other subject areas.

Generally over one third of university graduates went on to further education and training. Nearly a half entered UK employment. Over the late 1970s, however, the share going on to further education dropped and those entering industry and commerce had increased. Until recently there had been no

evidence of increasing unemployment among graduates. Annual surveys showed about 5 or 6 per cent were unemployed in the December after graduation. But there were warning signs: many more were taking temporary employment and the carry-over of job seekers from 1980 is about 15 per cent, three times the normal rate.

What was the attitude of employers to the increasing output of graduates? Professor Hunter argued that there had been complaints about both their quantity and quality. In the 1960s there had been the swing against science school-leavers, leading to several reports urging universities to make science more attractive and industry to specify its scientific needs more forcefully. Industrialists complained that science graduates were narrowly specialized, that arts graduates were bad with numbers and that PhD training was irrelevant for most industrial needs.

In the 1970s, too, employers expressed some dissatisfaction with the quality of recruits. The CBI, for example, called for more vocational and practical elements in degree courses, and for a shift from hard and pure sciences to management studies and applied science. Industrial and commercial employers found deficiencies in general management; the technological graduates lacked leadership and imagination while the arts stream lacked numeracy and enthusiasm for industrial employment.

In engineering there was more precise evidence of a mismatch. The Standing Conference of Employers of Graduates said there had been unfilled vacancies for most types of engineer in such of the years 1977-79. Similar claims were made in the Finlinton report and in Department of Employment data. But there were some questions, said Professor Hunter, about how real these apparent shortages were.

"The 1970s witnessed a fluctuating increase in demand for vocational specialists in the engineering field, and in certain areas... excess demand appears to have persisted. But it remains an open question whether there existed a true economic shortage, and certainly the problem was not purely quantitative: the mix of academic and practical skills together with personal attributes which employers were looking for, was relatively rare at the pay available and inhibited recruitment." The economists' "cobweb effect" reflecting the training time lag may also have prevented peak demand from being met.

Even professional education, where professional organizations gave employers more control over higher education, had not been free from these sorts of problems, Professor Hunter maintained. In law and accountancy the relationship between academic and vocational training on the one hand, and work experience on the other, had not yet been properly settled.

How had higher education responded to these criticisms? Course content within higher education was constantly revised and could not be described as stagnant. Much of the revision was aimed at being academically up-to-date rather than industrial-

ly relevant, however. This was despite the creation of the technological universities, the polytechnics and the new business schools.

A variety of explanations could be offered. There was a generally unfavourable view of industry in the schools; public expenditure economies were beginning to inhibit new developments; it was safer and cheaper to expand arts faculties than science ones; sandwich courses found difficulty in placing their students during downturns in the economy.

Perhaps the fairest conclusion, Professor Hunter argued, was that employers and higher education had not cooperated sufficiently in carrying the student through a degree course and the subsequent training stages. There should be a better integration between each stage. But why did the market mechanism apparently fail to match demand and supply?

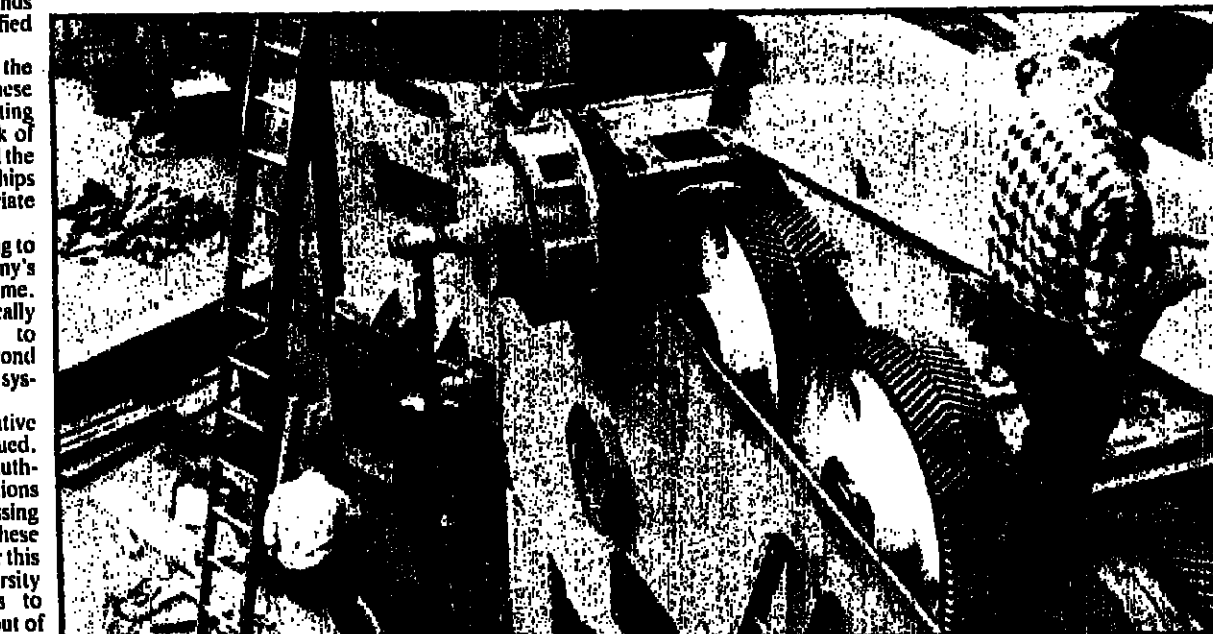
Shortages in the graduate market could be explained in three ways: a "sticky" market might reflect inadequate adjustments in relative pay; an "administered" market might set pay with regard to convention and not market forces; a "structurally deficient" market might be incapable of producing the required manpower. To unravel the real sources of the demand problem was a major task.

The evidence suggested that the market did adjust, but sluggishly. The inherent time lags in training were clearly one factor; the tendency of employers to recruit for short- rather than long-term requirements another. There was some evidence that employers failed to use adjustments in starting salary as actively as a competitive market would require. Employers had also blurred the market by resorting to screening graduates for credentials and, in some cases, hiring graduates as an insurance against an uncertain future without a clear idea of their function.

Given the weight of expert opinion against attempts to forecast demands accurately, how could the market be made to work better? "There is surely a case here for an authoritative and properly researched annual statement of current trends in various sectors as an aid to decision making," Professor Hunter argued. In addition, the use of market "signals" - specially pay - should be reviewed by employers.

A final consideration, Professor Hunter argued, was what governments were able to do about the size and composition of the higher education system. They may, in their present cost-cutting mood, like to believe that the market was saturated with graduates. If they were wrong, though, there would be grave shortages when the economy picked up.

Professor Hunter concluded: "Perhaps above all it needs to be stressed that sensible provision for the future needs to be taken with a view to the changing needs of society, not simply those of the economy, and from a starting point which offers scope for reasonably stable planning against these longer term needs - in sharp contrast to the highly unstable and ad hoc basis which has existed in recent years."



Engineering: evidence of a mismatch

Dr Benassis and the anatomy of change



In Honoré de Balzac's "Le Médecin de campagne" Pierre - Joseph Genestas, an ex-army veteran in his fifties, arrives in the mountain valleys of the Dauphiné where he encounters the Good Doctor Benassis who is attempting to combat the ignorance, disease and poverty prevalent in the region.

Emmanuel Le Roy Ladurie discusses contrasting attitudes to progress in the light of Balzac's *Le Médecin de Campagne*

The rural population of Savoy and Dauphiné were the victims, in statistically significant numbers, of specific dietary deficiencies: their drinking water, coming from the mountain springs or from melted snow, lacked iodine. The poverty of the people and the high cost of carriage meant that deliveries of salt water fish - herring, dried cod - were few and far between; and this was the only food which could have compensated, by providing the minute amounts of iodine essential for the healthy growth of young children. For this reason, many children in the mountains presented the simultaneous symptoms of idiocy, goitre and myxoedema: swollen thyroid and neck glands, gnome-like heads, baldness, retarded mentality, etc. Many Alpine valleys were transformed, by these deficiencies, into pockets of lunatic cretinism peopled by dribble-mouthed idiots, who became peepshows for the sick curiosity of travellers lured there in a disreputable form of tourism. But Benassis is no gaping tourist. He sets about remedying the disease, scouring out this affliction, eliminating it once and for all. Introducing iodine, he explains to Genestas what is happening while, at his side, in this wretched little cottage, his patient, the last surviving cretin in the canton, is breathing his last. Perhaps nowhere else in Balzac's racially-determined world is the confrontation between Enlightenment and the forces of a lumpen-, almost brute-like obscurantism pushed to such lengths as in this dramatic death-bed scene. Genestas, for our benefit, views both doctor and dying boy as they face one another. On one side, lit by the flames from the hearth, we see Doctor Benassis, his face satyr-like, his brow significantly protuberant: a great man for the ladies in this youth, he has now, in later life, turned away from such pursuits, but without renouncing his powerful procreative proclivities which have simply been diverted, employed to better advantage in the tasks of improving the medical, economic and social lot of a community of Alpine peasants. At his side the poor monster-headed cretin gazes up, his feet dangling in a bowl of brown stream-water placed for him by his poor soul of a mother.

The Doctor's method of combating cretinism is deliberately repressive. Before his arrival among them, the local peasants, old and young, male and female, thought of their cretins, in social terms, as so many Christs at liberty in their midst. They bore kindly with glibrous youngsters destined to so short a life: they venerated them and gave them alms, in the hope of ensuring themselves a reward in heaven.

They left them free - in the open air - to look after the sheep, instead of locking them up in asylums to die. The approach of country people to these cretins was very different from that of the education city-dwellers. In Grenoble and Chambéry, for example, the authorities had already adopted the cruel, modern practice of locking up imbeciles. (And yet there was a good remedy to hand for these glibrous regions of the Chablais: all that was necessary was to improve the diet of the people, and in particular see to it that they had supplies of salt-water fish.)

When Benassis arrives on the scene, he is by no means opposed to the notion of improving the food supply as a solution to the problem. But he is unaware - and how could he have known? - of the body's need for regular doses of iodine. In any case, his diagnosis and his therapy follow a very different path. Our good Doctor, in matters medical, is not always up with the event-garde; he treats his glibrous cretins according to the precepts of a philosophy already out of date. "If goitre spread in the deep valleys where the peasants of this canton used to live," Benassis tells Genestas in the course of their first meeting, "it is because the valley is never lit by the light of the sun, nor swept by a healthy wind." Condemned to perpetual shadow and stagnant air, the natives of the valley are also at risk from their drinking water, which comes directly from mountain torrents produced by the melting snows (on this point, the Doctor was quite right).

In the second place, in his attitude towards cretins, Benassis is drawn along in the immense racist current that, the eighteenth and nineteenth centuries had already set in motion (long before the excesses of the twentieth century). Cretinism and goitre, in his opinion, are caused as much (or more) by heredity as by diet deficiencies. The risk, therefore, is that the disease will spread throughout the canton simply as a result of intermarriage and the consequent population increase. Altogether, the Good Doctor's attitude is traditional on two counts: he professes (a) *constitutive* medicine, based on the state of the air breathed by the patient; and at the same time, (b) *species* medicine, the logical conclusion of which would be the castration of cretins. It cannot be stated too often that racism, which in Western culture, is nourished, in all its cultural and social practices, from a cultural and social practices, from a selective cattle breeding at one end of the scale to defence of hereditary aristocracy at the other. Hence the popularity, which takes many forms, of

a pseudo-scientific kind of genetics: it is found in the novels of Balzac and in the anthropology of the nineteenth century - to say nothing of our own time.

Such are the premises, then, of Benassis' social and medical experiments (often reminiscent of one of Molière's doctors) - destructive, repressive, morally castrating. Far be it from me to underestimate his day and night devotion to the care of his poor patients, but it has to be acknowledged that the remedies he prescribes often seem to derive from some old-wives' pharmacopoeia (couch-grass soup), while his therapy at times is no advance on that of Molière's Purgon whose only cure-all was fasting. And this, in spite of his peasants' reasonable pleas: in normal times never having enough to eat, they beg the doctor to let them eat their fill on the only occasion when traditional custom allows it, that is when they are ill. They plead in vain, the Doctor remains adamant. *A la diète!* (Nothing to eat!)

In other ways, too, his regime is well and truly "destructive and repressive": we hear him actually boast to Genestas: despite popular opposition - from the clergy, the women, the children and the old, who all vainly try to thwart his plan, Benassis has had the cretins, living in the canton of his experiment, taken away by night. They have been moved far away to asylums in Algebielle, where the poor creatures are "humanely treated" and prevented from sexual intercourse and reproduction.

Worse is to come: the great Saviour-Castrator is not satisfied with uprooting the cretins from the community. He also takes it upon himself, in all good conscience, to strip them of their possessions: to seize their family plots and, without further ado, transform them into communal property. From now on, irrigated in the Alpine or grassy meadows, these plots become healthy farms, a godsend for the malnourished, using their own and the common land, in the once-cursed canton. The end justifies the means. The better to achieve it, the Doctor employs a system of values which turns out to be double-barrelled. In the first place, he attacks the friendly, individual manner in which the cretins have hitherto been treated - according to age-old attitudes - by women, children, the poor, the elderly, and by the former-cured of the parish. This he does by invoking the new petty-bourgeois ethic based on *avances*, a manoeuvre which rouses the "rich" (or the less poor) members of the municipal council, and prompts them to vote spending money on the "idiots": they point out that the small local budget may run into the red. Consequently the "rich" are all for the concentration-camp type

deportations he is organizing against those who are weak in the head.

After Mammion, God (second barrel): Benassis calls for a change from the old obscurantist religion to a more enlightened new one. Old-fashioned Christianity teaches that poor unfortunate should be kindly treated, individually helped, supported and loved for what they are; but now this counsel to what, being nothing but superstition, unworthy of our century! Benassis therefore approaches the bishop of his diocese, and asks him to dismiss the local *curé*, who is resisting the regeneration of his flock. The new man will be a more understanding priest altogether, one who will be aware of the need to reconcile the imperatives of true religion, essential to social progress, with the harsh necessities of carrying out the drastic surgery on the commune. The *curé*'s blessing, and no misgivings, to proceed with the eradication of cretinism, thus guaranteeing, for the benefit of all unaffected members, the health of the communal body.

Here Balzac is harking back to a certain ecumenicalism, sometimes encountered in the eighteenth century, whereby the parish priest, the natural instrument of authority, is the indispensable agent of the spread of Enlightenment and Progress among the mass of the peasant population. At each other's throats in the towns, Voltaireans and Clericals often settled their differences in the villages: who better than a good churchman to teach country yokels respect for citizens' property, and to thunder from the pulpit about observing restrictions on the rights of way? Thanks to such restrictions (say Benassis and the *curé* Janvier) there will now, for the benefit of the whole community, be a new network of paths through the village, the channel the trampling feet of wandering flocks of sheep that used to be so grassy meadows, for farmers' property, old soldier that he is, may well (salades) preached by the *curé* from the pulpit but Benassis sets very high store by the value, both spiritual and material, of ecclesiastical teaching.

Perhaps I may be pardoned if I, too, express a certain scepticism on this point. I should like to suggest that the utilitarian Christianity championed by the Doctor was not really so very peasant: it was the education of the findings of research on this subject, it appears that in the period from 1815 to 1833, parishes in France where the Church was dominant were neither more progressive, nor more backward, economically, than those where the peasants were hostile or resistant to the Church. On the whole, and on this point I venture to contradict Benassis and his colleague Janvier, the civilizing

role of the rural clergy seems to have been more characteristic of the seventeenth century or possibly eighteenth, than of the nineteenth.

The first cut of the scalpel, paid to cretinism, may rather have been a breath of life. As Balzac sees it, though this is only the first advance in economic growth, the Alpine village must first pay its pound of flesh. It has been done. From now on, the village must be decontaminated, purged of its goitres, local society can expand. The village now protected from the ravages of the *curé*, the good Doctor can give rein to his economic miracle.

The "take-off" as economists would call it, of this canton of the Chablais happens in broadly four stages. **FIRST STAGE:** there is no question of "innovation for innovation's sake". And in any case, the canton has no providential natural resources - coal or metals. Nor does it have noble landowners who are rich, or lightened, blessed with capital, or prepared to invest it locally. The territory of *Le Médecin de Campagne* is a region with no seigneur, no lord, the minor. This is a "peasant no man's land" in the neo-populist sense of the term as used by the Russian economist Chuyunov: characterized by a patchwork of small plots; backward, uncultivated agriculture; illiterate, and in any case ignorant, lazy and stupid; also obscure landlords with no real family connexion. None of these is capable of offering any sort of leadership to the peasantry, who are themselves equally unenterprising. Unless that is, Benassis himself takes the notables in hand, reshapes them, and out of this very unpromising human material, fashions an élite after his own heart. And this is precisely what he does.

After the *coup* against the cretins, the good Doctor proceeds therefore to attack the task which Balzac considers the most crucial: the establishment, using the means already to hand, of a modest market economy. This means directing towards the rapidly expanding town of Grenoble, for example, a few leagues away, the little surplus there is of local agricultural produce. This is the only hope of extricating the peasants from the obscurantist squalor in which, without even putting up a struggle, they vegetate.

The opening-up of the little region operates, to begin with, along two different lines. The first is not particularly significant: an oxer bed is planted and - thanks to the injection of a little capital, a dowry from an outside source - a basket factory is established. Now the villagers can make a few containers for their cheeses - a delicacy - and send them down to Grenoble. The townspeople go mad about them. Next, again at the Doctor's instigation, and partly with money that comes out of his pocket, they build a road over the mountains. The former mayor, the proprietor of a saw-mill, can now deliver his timber to the

regional capital.

One thing leads to another. The development strategy takes shape of its own accord: to transport this timber, horses are needed; to shoe the horses, blacksmiths. And before long, even bakers are needed because the villagers are now much too busy transporting timber to make their own bread, as they used to in the old days.

SECOND STAGE: this revolution on the bakery front, a little far-fetched perhaps, leads Balzac and his spokesman Benassis on to the second phase in their joint programme of growth. The intention is to introduce large-scale agriculture. This is a difficult problem for, as I said, there is no local noble, no country gentleman, no *ci-devant* lord of the manor, no royalist landowner, no wealthy gentleman-farmer with money to invest, to set an example. The civilizing mission of the Comte d'Angerville, who was at the time in the process of rehabilitating his native Bugy, has no equivalent in our Chablais country. In the Alps, it is a case of starting from scratch - which implies the usual advantages of a clean sheet: thanks to Benassis, the village will pass directly from the swing-plough to the wheel-plough. The old implement was inefficient, barely scratching the soil, so the Doctor has ploughs, on the model of those in use in the north of France, manufactured locally. But the real problem lies elsewhere: land, buildings, capital. By great good fortune there appears a *deus ex machina* in the person of a certain "Monsieur Gravier, a wealthy public servant of private means. Bored with sitting in town, his bureaucratic files and his bird-brain of a wife, he is converted to the religion of progress by Benassis, and lays out large sums of money for projects of ground-clearance, building, rehousing, and leasing of untitled, under-employed land in this canton of the Chablais.

Stirred to emulation, the Doctor follows the bureaucrat's lead, and with his own money, in more modest amounts it is true, plays his part in the ground-clearance schemes. Altogether six farms are created, four by Gravier, two by Benassis, each of about 40 hectares (100 acres approximately) making a total of 250 hectares (600 acres). The farms are now rented out to tenant-farmers: this makes a welcome change from the old backwards sharecropping system previously prevalent in the canton. And then comes another miracle: an extra 250 hectares, produced as a result of further ground-clearances, are added to these conquests, but this time they become the personal property of the farmers. Here we find ourselves in the part of the novel which, if not the silliest, is nevertheless the most utopian, jump way ahead of history. We might almost be on the US frontier, or the Canadian prairies in the nineteenth century. For while Benassis and Gravier are busy winning a battle in the wheatfields, demography appears to be having a field day too. In one year, seventy houses are built. In six weeks, the local population increases by several hundred! Pure science fiction! These 500 hectares of large farms, created in a few years out of land hitherto brush and scrub, are enough to take away the breath of any economist who knows what the nineteenth century was like. And as for the demographic "take-off", no sooner are the glibrous cretins out of the way than we have the inhabitants of the canton multiplying like rabbits. Numbers in the village increase more than tenfold in a space of time scarcely sufficient for Benassis's hair to turn a little grey. Well now, are we to laugh this off? Yes and no. Like many a visionary, Balzac is overdoing it - in the short term. But in the medium term, and *a fortiori* over the long term, he has not got it wrong. Great advances in farming techniques and increases in the population were indeed among the important factors making for agricultural growth in the first half of the nineteenth century. But the scale was more modest than Balzac has it - particularly in the case of the Dauphiné.

THIRD STAGE: this phase in the regeneration of the canton is more convincing than the "great leap forward" of the preceding stage. This time, small-scale agriculture, semi-commercialized and accompanied by artisanal production, makes its reappearance. These two elements had inaugurated the "take-off" during phase I. The reason they were able to do so was the providential proximity of the Grenoble market, on the doorstep of the Chablais. They had taken a

back seat during phase II, which had been marked by massive injections of capital coming from outside sources, and particularly from the town - Grenoble once more. They recover their importance in phase III; thanks to the standard of living without a corresponding rise in the consumption of wine - and the conviviality that accompanies it. The slopes of the neighbouring village, as unsuited to wheat as they are to the good Doctor's heavy ploughs, take very well to the hoe, the hand-plough and the vine - and with vines they are covered. Simultaneously, taverns appear, right on the doorstep of Benassisville. They are not yet thought of as dens of alcoholism against which the prohibitionists will one day fulminate. They too are included in the torrential flood of social progress, in which wine, business and new ideas all mingle. Tourism which will later become an important feature of Alpine life now makes its debut with the building of an hotel to serve the needs of visitors to the Grande Chartreuse.

At the heart of this fast-growing little world there now springs up a profitable forest, planted on the land of which the cretins were forcibly dispossessed. Balzac's trees grow quickly, too quickly to be taken altogether seriously but we must remember that he has to make them keep up with the headlong pace of the various enterprises of our Good Doctor, whose time is limited. Little by little, this tall stand of trees with its layers of green foliage, covers up the memory of the original sin: the cruel expulsion of an innocent, feeble-minded and defenceless group of people. Reading *Le Médecin*, one could be forgiven for thinking that trees of all kinds flourished abundantly in great forests which sprang up spontaneously all over the mountain. But on this point Balzac is hopelessly unrealistic: his fiction transcends reality and forgets even to keep within the bounds of possibility. In this fast-developing Alpine world, the Doctor seems to have wrought a change in the climate! Not so much as a flake of snow ever falls! Balzac's geography is a little vague too: from this imagined Chablais, looking south through a gap in the mountain, one sees what in fact lies in an area from west to northeast, viz. the Lyonnais (to the south) and Dauphiné (to the north), and more to the Maurienne and Savoy (north and northeast respectively).

By Benassis, the one-man-band, after completing in magnificent style the first three movements of his regional revolutionary symphony is now in a position to tackle the fourth movement, which will take his canton to industrial maturity. The starting-point for the local manufacturing sector had been a humble saw-mill; next came the establishment of a number of little workshops where products rarely went further than Grenoble. Now, after a phase which sees a revolution in agriculture and land tenure, "modern" industry is about to appear - or at any rate a modest version of it. For there is more to the village economy than food and clothing: feet must be shod, heads covered, families housed. So, starting from scratch, a few enterprising businessmen, some from outside, some local, set up various establishments: first a brick and tile factory (which seems to have been launched at the opening of a new quarry, the proprietor used to go out and steal during the night); next hat and shoe factories, which in turn lead to the establishment, as natural corollaries, of tanneries and hat-factories linked to markets in Switzerland and the French Alps. The first features of an embryonic urbanization also begin to appear, as evidenced by the brand-new shops of the chemist, the bookseller, the watchmaker and the furniture dealer. We catch a glimpse of the time, not so very distant now, when this once-cursed village will compete with Grenoble, Chambéry and Allard-les-Bains.

Despite the Faustian energy by which it is driven and the novelist's licence to exaggerate, the model of agricultural and manufacturing development that Balzac proposes does not actually conform to the pattern of evolution in "traditional" France, south of the Cherbourg-Paris-Mulhouse line during the first three quarters of the nineteenth century (except of course for the genuine capitalist developments about this time in Saint-Etienne, Alsas and Decauville). Up here, in Dr Benassis' mountains, as yet no blast furnaces or chemical factories have arrived to pollute the skies of Balzac's imaginary Dauphiné. The manufacturing indus-

try, based on simple technology, which crowns the efforts of the Redeemer of the Chablais, has been grafted on to a background of small-scale enterprises, part-agricultural, part-artisanal, which helped to launch the economic take-off. Such complexes are typical of a certain type of growth: petty-bourgeois, non-polluting. One finds it in many regions of Europe in the nineteenth century, especially in the south. We have lost sight of it today, through a kind of teleological blindness, due to the more "successful" achievements of large-scale industrial and financial capitalism, which unduly occupies the front of the stage. And yet it was on small-scale developments of this kind; efficient and unspectacular, that much of modern society was built - in central and Mediterranean France, in Italy and Spain - but not of course in the smoke-laden zones where the "real" industrial revolution, Lancashire-style, took place. Only the latter kind of industrial development is recognized in the history books, because this was the one that won out in any rational path to modernization: it is at the opposite end of the spectrum from *Genestas*, the harrowing epic of another type of growth.

Such petty-bourgeois features do not, however, prevent this society, created over a period of 20 years by the good Doctor, from being profoundly inequalitarian. Benassis himself is conscious of this fact: in this little Chablais community, after the great changes he has brought about, there are a few families who are rich, though not extravagantly so; a further minority who could be termed well-to-do; the vast majority who are poor working people; and in theory (though it seems unlikely) not a single beggar, so well policed is the process of growth. The medical and social enterprises fostered by the local Redeemer result in a mixture of small-scale family farming, whose produce is hawked locally; larger-scale tenant-farming; craft production; self-financed manufacture, and a slightly disgruntled petty-bourgeoisie. The mixture more closely resembles the bourgeoisie of the Loire valley than the grandiloquent descriptions written by Karl Marx later in the century. He predicted the disappearance of this small-scale economy. In the event it survived well beyond Marx's lifetime. The theorist of socialism was over-hasty in prophesying the victory of large-scale capitalism. Small plots of land, small shops and workshops were destined to remain essential components of the western economy, only until at least 1910, if not 1950 or later.

It would, however, be wrong to paint too idealized a picture of the Benassis recipe for growth: it has its weaknesses as we have already seen, and even its harmful by-products - low wages for example, the result of the low prices of agricultural produce which had persisted since 1818. Low wages were particularly rife in this expanding little corner of the Chablais. Not without a tinge of cynicism, Balzac considers them to be a panacea for the economic development of France.

Balzac's account of rural life mentions cases of destitution or marginality in addition to straightforward poverty - whether caused by low wages or not - and in so doing sometimes transfigures them: the old people who eke out a living by clearing a patch on the wild mountainside; and *la Fosseuse* ("Ditch-dweller"), the beggar girl, who is the only representative of child or juvenile vagrancy resulting from villages having become deserted. In the case of this girl, Balzac attempts, and once more brings off, the task of transfiguration he previously accomplished, apropos of the foster-mother who is not a baby-killer. In a novel by Dostoyevsky, *la Fosseuse* might have been one of the infinitely pitiful characters like Marie, the Swiss village child, in *The Idiot*. But with Balzac, the bourgeois apologist of redemption by work, *la Fosseuse* achieves her salvation more prosaically in the drudgery of her task as a linen-maid, a post procured for her by Benassis, and in the affection he constantly showers upon her.

Another marginal character is Butifer, the chamois hunter and shoeshoemaker from the Mandrin country. Balzac, who came from Touraine, is usually uninspired in his descriptions of the Alps and the Alpine people, subjects with which he is unfamiliar. But in his portrait of Butifer, he is on sparkling form: the sporting prowess of the mountain people and their incredible climbing feats on the rock-face

genuinely fascinated him, so we are treated to a brief flight of lyricism. Butifer's age-old way of life, however, based on poaching and smuggling, is well suited to the ecology of the mountains but it no longer fits in with the norms of a well-ordered society as prescribed by Benassis. A reformed character, thanks to the good Doctor, Butifer is now obliged to take up another calling: he is to train Genestas' son (who later goes on to become a student at the *Ecole Polytechnique*) in the mainly virtuous of the Savoyard mountaineers: after that he comes down to *terra firma* and transfers his talents to the army, that last refuge of society's misfits, there to earn a soldier's pay and, in the end, a hero's grave.

Butifer's place is with the wild animals and the harsh life of the mountain peaks. But with another villager, Gondrin, we move in quite a different direction, into the sophisticated areas of political conflict. A crippled survivor of the *Grande Armée*, by some miracle Gondrin had managed to save his skin from the icy waters of the Beresina. Back home in his native country, he finds himself deprived, by bungling bureaucrats, of the disability pension he ought to be receiving. The anti-government recriminations of the tired veteran introduce, for the first time so far in the novel, the contagion of political protest to a region which does not otherwise appear anxious to participate in history, or to draw attention to itself. Until this point, the book seems to suggest that justice and welfare are dispensed from above by Benassis, rather than demanded from below by the peasants. (On this point, Balzac's version is quite different from the real Dauphiné, which was a very revolutionary province, even at grass-roots level, after 1789.)

But let us look at the incident from the viewpoint Balzac thought most appropriate: a peace-loving one in almost every respect. True, Benassis is aware of, and can gauge exactly, the gulf of incomprehension that separates the bourgeoisie from the man of the people, and even more from the peasant. It takes the Doctor a good deal of time and tact before he succeeds in holding a dialogue with lower orders - a paternalist dialogue naturally: they will never turn him into a supporter of universal suffrage. But on the peasant side of "the gulf", which remains a deep one for everyone except Benassis, resignation rather than revolt reigns. It requires the experience of a Gondrin, who has become urbanized by military service, for a mighty fury to burst out from this peasant community against a Power that could refuse a Wounded Soldier his few pence of a pension. It is not without significance that this malcontent had ended his career as a soldier in the *Grande Armée*. In these remote regions of France, the Napoleonic legend produced, in its own peculiar way, a certain political awakening and consciousness among the peasants.

Gondrin stands out as one of the sponges and bladders of the new regime. Another of these has a rather different origin: the revolution in cereal production, Benassis' pride and joy, brings in its train money-lending and money-lenders, since there is no agricultural credit system in operation. A certain Monsieur Taboreau makes a fortune by providing loans for purchase of seed-corn against subsequent repayments at exorbitant rates of interest. Benassis takes no exception to such practices, while he sees in the unavoidable consequences of the system of self-sustaining development that he has inaugurated.

According to some of today's experts, there are cases in which development takes place not by means of some sudden change of habits, but by the action of a few elements present in the traditional culture which lend themselves to economic growth. Japan and Indonesia are convincing examples in support of this theory, and have fascinated students of economic "take-off". Balzac, as a purely amateur ethnographer, dashing off in holiday pursuit of numerous escapades, but imbued nevertheless with a remarkable capacity for anthropological synthesis, sensed all this by vivid intuition as he explored, at breakneck speed, one or two mountain or rural regions.

The author is professor of the history of modern civilization at the Collège de France. This is an extract from his "The Mind and Method of the Historian" which is to be published in June by Harvester Press.

NOTICE BOARD

Forthcoming Events

"Working in Music with Handicapped Children and Young People", a weekend conference designed to discuss the benefits of the use of music in working with handicapped children is to be held this weekend in Middlesex Polytechnic's Music Education Centre, Trent Park, Cockfosters.

"Freedom and Society", an open lecture is to be delivered by Mr. Ron Hare, fellow of Lincoln College and lecturer in philosophy of science at the University of Oxford tomorrow at 3pm in the small hall, Senate House, University of London. Fee: £1.00.

The Polytechnic Association for Continuing Education is sponsoring a number of workshops for academic staff and administrators. The first is to be held at the Polytechnic of Central London on June 3 and will cover internal budgetary control, statistical analysis in short course organization, further details from PACE secretary, Mrs. Robinson, Extension Studies, Trent Polytechnic, Nottingham.

Learning at a Distance is the theme of the Twelfth World conference being sponsored by the International Council for Correspondence Education from June 9-13 1982 in Vancouver, Canada. Topics include learner characteristics, economics of distance education, use of technological media, tutoring and support services, and distance education and national development. Further details from Dr. Ian Macgregor, Open Learning Institute, 7671 Alderbridge Way, Richmond BC, Canada.

"Education in Work", Post Experience Vocational Provision, a one-day meeting to be held at the All Saints Building, Manchester Polytechnic on June 12. Speakers include Mrs. Carol Chaffey, assistant secretary higher and further education Branch of the DES, Fee: £8.50. Applications to Mrs. A. Bromley, Staff Development Unit, Manchester Polytechnic.

"CND Revisited" is the theme of the History Workshop London Seminar at which Stuart Hall will speak on June 1 in the Dull and Murch public house at Dury Place, London WC1, club room first floor.

Courses

GARNETT COLLEGE

Education and Training for Teachers and Administrators in Further Education

Applications are invited for the following courses:-

Bachelor of Education
Three years' part-time study. Prepares candidates for research in further education. Candidates should have an initial teaching qualification and a minimum of two years' experience.

Diploma in Further Education
One year full-time or three years' part-time study. Relates the study of further education to contemporary educational theory and to current developments. Candidates should have reasonably substantial teaching and/or administrative experience in further education, administration or industrial training.

Diploma in Educational Management
Two years' part-time study. Aims to provide a sound academic grounding in educational management and an opportunity to improve management skills. Candidates should have reasonably substantial teaching and/or administrative experience in further education or associated fields.

Diploma in Educational Technology
(for Further Education)
Two years' part-time study. Develops professional competencies in the management and organization of learning resources. Candidates should have initial professional qualifications and be experienced teachers, librarians or administrators in further or higher educational establishments, local government service or industrial training.

Certificate in Education
Sandwich or part-time courses extending over one, two or three years. Provide a basic course in the theory and practice of further education for those engaged in the teaching or training of the 18-20 age group.

ilea

Candidates should apply as soon as possible specifying the course(s) in which they are interested, to the Principal (Mr. J. HES) Garnett College, Downside House, Roehampton Lane, London SW15 4HR. (Telephone 01-789 8531)



Dead in Venice, etching by Chris Orr, from the presentation of German galleries, currently on show at the Goethe Institute, London (ends June 11).

Chairs

Dr. T. Bell senior lecturer in the department of metallurgy and materials science at the University of Birmingham, has been appointed to the Harman chair of metallurgy in the department of industrial metallurgy at the same university from October 1, 1981. He succeeds Professor D. V. Wilson, who retired in December 1980.

Kenneth Jackson Davey, senior lecturer in the department of local government and administration and associate director of the Institute of Local Government Studies at the University of Birmingham, has been appointed to the chair of development administration at the same university from April 1, 1981. Professor Davey has since 1975 been in charge of the Development Administration Group which provides training, research and consultancy services to developing countries. Over the past decade the group has become internationally recognized as one of the leading institutions of its type.

Professor J. B. Copas, professor of statistics in the University of Salford has been appointed to the chair of statistics and headship of the department of statistics at the University of Birmingham, from October 1, 1981.

Open University programmes May 30 to June 5

Saturday May 30

- BB01 7.19 Evolution. The Fish on the Bones (S364 prog 7).
- 7.40 An introduction to materials. Choosing a Material (S351 prog 7).
- 8.06 The revolutions of 1848. Revolutionary Theatre (A321 prog 5).
- BB02 7.40 Contemporary issues in education. William Tyndale (E200 prog 10).
- 8.06 Mechanics and applied calculus. Fields in mechanics (M523 prog 7).
- 8.08 Arts foundation course. "Jumps" (A101 prog 14).
- 8.08 Physics, people and administration. The Continuum (D134 prog 7).
- 8.20 An ageing population. A Continuum of Care (P252 prog 8).
- 8.28 Science and belief: from Copernicus to Darwin. Science and Belief in 18th Century France (AM1263 prog 5).
- 22.16 The rise of modernism in music 1890-1935. Berg's "Wozzeck" (A308 prog 7).

Monday June 1

- BB01 8.40 Genetics. Cortical inheritance in Paramoecium (S299 prog 7).
- 7.08 Physics, brain and behaviour. Moving Muscles (M523 prog 7).
- 7.30 An introduction to calculus. Scaling and Approximation (M523 prog 7).
- 7.30 Elements of music. Harmonizing a Tune (1) (A241 prog 7).
- 22.16 The rise of modernism in music 1890-1935. Berg's "Wozzeck" (A308 prog 7).
- 18.08 Greece 478-336 BC. Social Life: The Oikos (A292 prog 4).
- 17.18 The rise of chemistry. Intramolecular Rearrangements (S334 prog 16).
- 17.40 Mathematics foundation course. The Fundamental Theorem of Calculus (M101 prog 13).
- 18.30 Food production systems. Novel Protein (T275 prog 4).
- BB02 8.40 An introduction to calculus. Scaling and Approximation (M523 prog 7).
- 8.15 Elements of music. Harmonizing a Tune (1) (A241 prog 7).
- 22.16 The rise of modernism in music 1890-1935. Berg's "Wozzeck" (A308 prog 7).
- 22.30 Social psychology. Conversation with Erik Erikson (D305 prog 7).

Tuesday June 2

- BB01 8.40 Biology: form and function. Patterns in Development. Cell Movement (S302 prog 14).
- 7.08 Physics, brain and behaviour. Moving Muscles (M523 prog 7).
- 7.30 An introduction to calculus. Scaling and Approximation (M523 prog 7).
- 7.30 Elements of music. Harmonizing a Tune (1) (A241 prog 7).
- 22.16 The rise of modernism in music 1890-1935. Berg's "Wozzeck" (A308 prog 7).
- 22.30 Social psychology. Conversation with Erik Erikson (D305 prog 7).
- BB02 8.40 Biology: form and function. Patterns in Development. Cell Movement (S302 prog 14).
- 7.08 Physics, brain and behaviour. Moving Muscles (M523 prog 7).
- 7.30 An introduction to calculus. Scaling and Approximation (M523 prog 7).
- 7.30 Elements of music. Harmonizing a Tune (1) (A241 prog 7).
- 22.16 The rise of modernism in music 1890-1935. Berg's "Wozzeck" (A308 prog 7).
- 22.30 Social psychology. Conversation with Erik Erikson (D305 prog 7).

Sunday May 31

- BB01 7.40 Crustal and mantle processes: case studies in geophysics. Earth science topics and methods. Part II: The Dynamics of Earth's Interior (S334 prog 5).
- 8.06 The revolutions of 1848. Revolutionary Theatre (A321 prog 5).
- BB02 7.40 Crustal and mantle processes: case studies in geophysics. Earth science topics and methods. Part II: The Dynamics of Earth's Interior (S334 prog 5).
- 8.06 The revolutions of 1848. Revolutionary Theatre (A321 prog 5).
- BB03 7.40 Crustal and mantle processes: case studies in geophysics. Earth science topics and methods. Part II: The Dynamics of Earth's Interior (S334 prog 5).
- 8.06 The revolutions of 1848. Revolutionary Theatre (A321 prog 5).
- BB04 7.40 Crustal and mantle processes: case studies in geophysics. Earth science topics and methods. Part II: The Dynamics of Earth's Interior (S334 prog 5).
- 8.06 The revolutions of 1848. Revolutionary Theatre (A321 prog 5).
- BB05 7.40 Crustal and mantle processes: case studies in geophysics. Earth science topics and methods. Part II: The Dynamics of Earth's Interior (S334 prog 5).
- 8.06 The revolutions of 1848. Revolutionary Theatre (A321 prog 5).
- BB06 7.40 Crustal and mantle processes: case studies in geophysics. Earth science topics and methods. Part II: The Dynamics of Earth's Interior (S334 prog 5).
- 8.06 The revolutions of 1848. Revolutionary Theatre (A321 prog 5).

Wednesday June 3

- BB01 8.40 Biology: form and function. Patterns in Development. Cell Movement (S302 prog 14).
- 7.08 Physics, brain and behaviour. Moving Muscles (M523 prog 7).
- 7.30 An introduction to calculus. Scaling and Approximation (M523 prog 7).
- 7.30 Elements of music. Harmonizing a Tune (1) (A241 prog 7).
- 22.16 The rise of modernism in music 1890-1935. Berg's "Wozzeck" (A308 prog 7).
- 22.30 Social psychology. Conversation with Erik Erikson (D305 prog 7).

Noticeboard is compiled by Patricia Sandilands and Milla Goss

Grants

Bath

Chemistry - Dr J. N. Andrews - £10,000 for research into radio chemical analysis of organic materials.

Electrical engineering - Dr J. P. Stern - £17,935 from the Post Office for research into the use of optical fibre in telecommunications.

Humanities and Social Sciences - Prof. J. Klen and M. L. Chellis - £30,000 from the Arts and Humanities Research Council for their work on joint approaches to the study of the history of the book.

Mathematics - Dr N. G. P. C. Pao - £41,280 from the Office for its work on machine classification of data.

Lancaster

Biological sciences - Dr P. G. Ayres - £10,000 for research into the effects of stress on the immune system.

Chemistry - Dr N. G. P. C. Pao - £41,280 from the Office for its work on machine classification of data.

BOOKS

'Art for life and life for art'

Nietzsche on Tragedy by M. S. Silk and J. P. Stern. Cambridge University Press, £27.50. ISBN 0 521 23262 7.

by H. B. Nisbet

When Friedrich Nietzsche published his first book, *The Birth of Tragedy from the Spirit of Music*, he was a promising young professor of classical philology at Basel. The book, which appeared in 1872, contained a provocative and unorthodox account of the genesis of Greek tragedy from two complementary impulses: the Dionysiac (associated with the origins of Greek religion, with music, and with a tragic awareness of the horror, suffering, and meaninglessness of individual existence) and the Apollonian (associated with the comforting illusions of form, order, artistic beauty, and Olympian serenity). It ran into opposition from the start, above all from Nietzsche's fellow-classical scholars, led by Ulrich von Wilamowitz-Möllerndorf. Their hostility hastened Nietzsche's later decision to abandon classical philology for the life of an independent philosopher.

It was not only Nietzsche's many historical and philological errors, but his deliberate flouting of all scholarly norms in his aims, method, and style that angered his professional colleagues. His reading of Schopenhauerian pessimism into Aeschylus and Sophocles, his summary condemnation of Socratic rationalism (and the whole western tradition of knowledge and science which allegedly sprang from it) as decadent, his equation of Wagnerian music-drama with Greek tragedy, and his ecstatic praise of Wagner himself as the saviour of modern culture were intolerable heresies in the eyes of the academic fraternity. And the book's controversial status was enhanced rather than diminished as its undoubted importance was gradually recognized: despite its many weaknesses, it can now be seen not only as a formative stage in Nietzsche's philosophical development and as the source of a potent myth which several generations of artists and thinkers have exploited, but also, in the words of a contemporary classical scholar (Hugh Lloyd-Jones), as "a work of genius which beggars all other understandings of Greek thought".

The authors of the present collaborative study, the most comprehensive on the work to date, are, respectively, a classicist and a Germanist who has published two previous books on Nietzsche. As such, they are well equipped to deal with a work which has had a considerable impact both on classical studies and on German literature and thought. They take equal responsibility for the published text, although the Greek and biographical material was in the first instance worked by Dr Silk and the material pertaining to German literature and thought by Professor Stern.

The 10 chapters of the book deal with the rise of Hellenism in Germany; the early biographical background; the genesis of *The Birth of Tragedy*; the argument of the work; its contemporary and subsequent reception; Nietzsche's account of Greece; the mode and originality of the work; Nietzsche's views on tragedy, music, and aesthetics; Nietzsche and earlier German theories of tragedy; and the work's style and philosophy. *Nietzsche on Tragedy* has the advantage over Professor Stern's earlier Nietzsche books that it concentrates on a single work, and is correspondingly more thorough and informative. The detailed account in the first half of the book of the background, development, and reception of *The Birth of Tragedy* and of the place in the history of classical scholarship is admirable and, so far as I can judge, accurate. The chapters on the reception of the work by classical philologists (very little is said on Nietzsche's account of Greece or on particularly welcome, since they add a good deal of new information to the now somewhat dated studies by

Charles Adler and Ernst Howald (1920).

It is inevitable that, with a work which has been so vociferously condemned and so enthusiastically praised, the authors should spend much of their time assessing its strengths and weaknesses. Although they have many positive things to say, they also expose numerous errors and shortcomings. Apart from the factual inaccuracies of Nietzsche's discussion of Greek tragedy (many of which Wilamowitz noticed and others of which merely reflect the state of knowledge in the later nineteenth century), the authors show how completely Nietzsche misrepresented Greek music, generalizing as he did from the modern Western tonal tradition. Contrary to what Nietzsche maintained (on the basis of Schopenhauer's aesthetics), Greek music at the time of Aeschylus was not merely tied to the poetic word, but subordinate to it. Besides, although Nietzsche described sculpture as the Apolline art and music as the Dionysiac, Dionysus was no more the god of music than Apollo was god of the visual arts. Nietzsche selected Aeschylus as his paradigm, despite the fact that the tragedies of Sophocles can be squared more easily with Schopenhauerian pessimism: one reason for this was that Aeschylus was closer to the origins of tragedy, but the main reason was that Wagner, inspired to emulate Aeschylus rather than Sophoclean drama. Or again, Nietzsche neglects the socio-political aspects of Greek tragedy and religion almost completely in favour of metaphysical, existential interpretation; his emphasis on the unity of Greek culture leads him to ignore the fact, for example, that Apollo and the Olympians have their roots in an aristocratic, warrior cult, whereas the worship of Dionysus was associated with women and with the common people. For similar reasons, he fails to acknowledge that, at the time of the Persian wars, the influence of Attic tragedy was confined almost exclusively to Athens. On these and many other matters, Nietzsche makes inaccurate generalizations about Greek tragedy, and has little to say on the characteristics of individual dramas.

The reason for this, of course, is that he is more concerned with "the tragic" and its essence than with the actual practice of the Greek tragedians. In short, *The Birth of Tragedy* is ultimately neither a genre-study nor an essay in aesthetic theory; it propounds a metaphysics of man's tragic condition, and prophesies a new "tragic culture" of unspecified nature whose birth is heralded by Wagner's music-drama. Even the central metaphysics of the work, however, is fraught with obscurities, resting as it does on an ill-defined creative principle which Nietzsche variously describes as the universal will, the primordial oneness, and the world-artist (*Weltkünstler*). And the relationship of this demiurge to art and life is imperfectly resolved: "The principle that art exists for life and life for the world-artist is nothing but a vicious circle: art for life and life for art" (page 294).

"The brilliance and the exasperation of this extraordinary book stay with the reader to the end", the authors tell us. It is obvious enough from the foregoing what some of the sources of exasperation are. But what of the brilliance? And of that originality of which there is so much talk in the second half of the book? Clearly, there are Nietzsche's new and fruitful insights into the spirit and psychology of Greek religion and the evolution of Greek culture. For instance, his nihilism of the Dionysiac and the Apolline correctly identified two distinct religious currents, an ecstatic current and a "legitimized" or formal one, and his presentation of the former did indeed throw light on the irrational side of ritual and worship in Greece. And to take another example, his reflections on the rise of Socraticism and the death of tragedy in the fifth century did point to a fundamental change in Greek culture, a change of which the growth of rationalism was only one part; the erstwhile unity gave way to special-



Friedrich Nietzsche

ism, music and poetry became autonomous, philosophy inherited the intellectual-spiritual function of poetry, and the rise of oratory undermined poetry's status as a public art-form. But there is more to it than this. To judge from the chapter on "Mode and Originality", it appears that it is not so much in its ideas that the work is original: even the Dionysiac Apollo antithesis, however much Nietzsche extended, particularized, and elaborated it, is not fundamentally new, and the section on "The Originality of the Book as a Whole" consists largely of a list of Nietzsche's debts to Schopenhauer, Wagner, and earlier Greek philosophy. "Its originality", the authors in fact tell us, "is not like the originality of a work of scholarship; it does not unearth new data or submit old data to a newly systematic re-examination. It is rather in the 'mode' of the work that its chief merit and originality reside. But when we ask how precisely this mode is to be defined, we encounter the least satisfactory part of Nietzsche on Tragedy."

If we judge Nietzsche's work by the criteria of scholarship and logical thought, it is at best seriously deficient: it is too generalized and inaccurate for a historical work; too unspecific for a genre-study; too narrowly based and selective for an aesthetic treatise; and too inconsistent and inadequately resolved for a metaphysical statement. If, on the other hand, we judge it as a work of art, it is equally unsatisfactory: there is too much abstraction and scholarly detail, and its loose structure and many digressions give it little formal cohesion. But according to Dr Silk and Professor Stern, it should not be judged either by the criteria of thought or by those of art, since Nietzsche's whole endeavour, in his condemnation of that disjunction of art and thought which began with Socrates, is to set himself up as an "artistic Socrates" and to combine the two. His rejection of scholarly convention was the deliberate consequence of his yearning for wholeness, and his craving for a unitary culture. *The Birth of Tragedy* is accordingly composed in a "mixed mode", it is a "centaur" (Nietzsche's own expression), a hybrid work of literary-philosophical prose "a kind of art thought invented ad hoc". These terms suggest that the work is a mixture of two kinds of discourse in which the characteristics of each remain separately identifiable. But the formulation soon shifts to become "a new kind of conceptual art", and the authors postulate a particular "mode of artistic discourse for which *The Birth of Tragedy* is the original, perhaps imperfect, prototype" - turns of phrase suggesting a distinct form of

described as woolly thinking. Nietzsche's use of metaphor, of the language of expressive portraiture, certainly helps to convey the atmosphere of the world he seeks to portray; and the authors assure us that the intention of his figurative and mythic language is "to transmit rather than explain" the mysteries of Greek religion. But such mannerisms—the term "mode" implies a greater consistency than is inherent in such procedures—make it difficult to be sure when Nietzsche's expressions are to be understood literally and when metaphorically; and it is the latter, whether the metaphor is appropriate in a given context or not. And they run the risk of that circularity inherent in all accounts of a subject couched in terms derived from the subject itself, unless the meaning of those terms is self-evident or defined in advance—Nietzsche, however, constantly extends the range and meaning of his terms as he goes along.

How then are we to assess Nietzsche's image-laden pronouncements? The authors tell us that "what Nietzsche feels he describes, and the more honest the feeling, the richer the description". Nietzsche's feeling here becomes the means of assessing his pronouncements; yet the pronouncements themselves are the only means we have of assessing his feeling. On these questionable grounds, the authors conclude that his talk of a world-artist must be hollow, because he is unable to describe the latter (page 293). Undeterred by this, they later tell us that "in Nietzsche the inexpressible contains all that really matters" (page 367).

In the last resort, everything depends on whether Nietzsche's rhetoric gains our emotional assent or not. He himself, in his *Self-Criticism* of 1886, condemned *The Birth of Tragedy* as badly written, lacking in rigour, and *haldunig und haldunig* (that is, with a mad confusion of images). This awareness did not prevent him, in his subsequent works, from continuing to indulge his flair for dramatic (and melodramatic) metaphors, to the point when, philosophizing with the hammer, he succumbed to the intoxication of his own rhetorical effects. Until we have more convincing arguments than those provided in *Nietzsche on Tragedy*, there is no justification for rejecting the traditional verdict that much of Nietzsche's discourse is an unhappy mixture of philosophy and metaphor; and that, with what T. J. Reed has aptly called his "exhortatory and exhortatory cyphers" ("Nietzsche's Animals", in *Nietzsche: Imagery and Thought*) he sacrificed conceptual precision without gaining the richness and finesse of poetry.

Nietzsche on Tragedy is, then, a book full of useful information on the genesis, substance, and reception of *The Birth of Tragedy*, but with debatable things to say on the nature and quality of Nietzsche's writing. There are controversial and subjective judgments on other matters too, for instance on Nietzsche's views concerning the redeeming function of tragedy: "The cogency of the argument may be less than complete; its concluding insight takes us to the depths of the human predicament." It displays wide reading and much liveliness of mind, but it is, particularly in the later chapters, discursive, essayistic, and repetitive. The earlier theories of tragedy discussed in the ninth chapter often have little or no bearing on Nietzsche's, and it is hard to see why, for example, a five-page discussion of Hegel's interpretation of *Antigone* was included. The last chapter is a rather diffuse commentary on Nietzsche's work, section by section, with random stylistic and philosophical observations which often reiterate earlier points; there are telling aperçus here, but one has to hunt for them. The volume tails off at this point, and one feels the need for a concluding chapter to pull the various strands of argument together and to reinforce the main conclusions. It is an impressive and exasperating book.

For some, this may be "conceptual art". For others, it might better be

H. B. Nisbet is professor of German at the University of St Andrews.

BOOKS

A viable class society

The Structured Crowd: essays in English social history
by Harold Perkin
Harvester Press, £20.00
ISBN 0 85527 413 1

The Origins of Modern English Society 1780-1880, published in 1969, the book with which Professor Harold Perkin established his reputation, was an interesting and ambitious attempt to interpret the social history of England in that century of crucial transformation. He did so, not so much in terms of the socioeconomic classes as of the allegiance of people to specific class ideals. It shared with E. P. Thompson's influential book, *The Making of the English Working Class*, published six years earlier, an emphasis on free will and conscious class allegiance, but Perkin's broader study treated aristocrats and indeed every kind of property-owner as historical figures in their own right, not merely as instruments of class oppression. He thereby provided a badly-needed corrective to the influence that Thompson had begun to exert over the minds of students of English history. Furthermore, while Thompson's work ended abruptly in 1832 and he has subsequently shifted his attention to eighteenth-century society, Perkin offered a fresh version of the theme that has never failed to fascinate historians of nineteenth-century England, the resolution of the tensions of the first half of the century into what he felicitously called "a viable class society".

As an interpretation of the social history of England in that period, his book has had few rivals and must

have been read by a large number of students over the last decade. Yet it has proved a difficult book to assimilate and has been less influential than might have been expected. Its emphasis on competing class ideals appeared to be more abstract and disembodied than many people liked or knew what to do with. The important autonomous role that Perkin ascribed to the professional class, treating it at one moment as a real class like all the others, and at another as peculiarly liable to produce "social cranks", free-floating intellectuals able to become the spokesmen of any of the other classes, has also been rather cautiously received. Yet in both cases he was drawing attention to matters of importance. They deserved to be explored further so as to demonstrate their value for the purpose of explanation.

For some time now it has been known that Professor Perkin was engaged on a second volume to encompass the period since 1880. This is expected to incorporate a systematic study of elites as well as further to develop his view on the central importance of the professions in modern society.

What has now appeared is not the long-awaited book but a miscellany of occasional pieces. Most of these have appeared elsewhere, in journals or in books, and many within the last few years. Even judged on its own terms as a collection of "essays in English social history", this is not the book we have been waiting for. The pronouncements on the nature of social history with which the collection opens and closes do not sustain the expectations that they raise. The first is a piece of juvenilia of little

interest now. The last is little more than a report on work available and, although it appeared only four years ago, it is already out of date. As for the eye-catching title, potential readers should be warned that this is not a book about crowds, whether structured or otherwise. It is about aspects of English society, and the attempt to erase the distinction between these two concepts, which is to be found in the introduction to the book, cannot be regarded as a contribution to social analysis.

The remaining 11 pieces reveal Professor Perkin as able to turn his mind to many things. Most of them are severely restricted by the occasion for which they were originally produced. One very early piece has long been incorporated into the book of 1969. One major study in which the professional class plays the sort of role for which his book had prepared us was written as long ago as 1958 and already published in 1973. Entitled "Land Reform and Class Conflict in Victorian Britain", it is by far the most substantial in this collection. But we look in vain for any sign that Professor Perkin has found the concepts and approach of his original book significant and fruitful in his development as an historian. It is the absence of anything of like stature dating from more than a few years that makes one think that Professor Perkin has reserved his best thoughts for the major volume which is yet to come.

E. P. Hennock

E. P. Hennock is professor of modern history at the University of Liverpool.

Chamberlain's impenetrable motives

Joseph Chamberlain: a political study
by Richard Jay
Clarendon Press: Oxford University Press, £16.95
ISBN 0 19 822623 3

Chamberlain remains the most elusive among front-rank politicians in *fin-de-siècle* Britain. Even Dr Jay's absorbing study leaves a sense of questions still unanswered and distances somewhat unshortened. The first half of Chamberlain's career—say from 1874 to 1886—insists that one find a mental model which will lend his behaviour some prospective coherence; but when this is constructed it seems only partially to explain the second and more significant section of Chamberlain's political life when he came within a whisker of unseating Balfour and taking prisoner the Conservative party.

Perhaps biography has tended to fail because Chamberlain never had a "life" at all in the sense of bundled themes and tendencies along which the historian could stitch his seams. It seems rather to be some Bergsonian force that Chamberlain presents, constantly creative and evolutionary. "Why he did so is not entirely clear... the purpose of these speeches is rather unclear... the reasons are by no means clear... his aims and motives are very unclear". There are many such moments when Jay protests the impossibility of his task.

Yet this new study has been worthwhile because it has enabled its author to offer a suggestive interpretation of many confused aspects of Chamberlain's behaviour and motivation. Birmingham and nonconformity receive, for example, considerable emphasis: the root comes with the plant. The mayoral period is pressed, however, less for its importance in forming an electoral base than in giving Chamberlain a mental screen on which he would always tend to throw his images, leaving him with an impression both of ideological sociology and political technique that was inaccurate and dangerous.

Nonconformity, on the other hand, Chamberlain was anxious to shed. His own Unitarianism played an important role in his early years; but once he abandoned the infantile disorders of the early 1870s (riding bandwagons drawn by Forster's opponents) he was more likely to be seen distancing himself from sectional clamour than hoping to be seen responding to it. Hence the urgency, perhaps, of the tariff reform initiative of 1902-3 as he strove to make the country talk about something other than Balfour's Education Act which nonconformity urged him to oppose.

That decision—to campaign for a realignment of anti-liberal politics along the lines of economic protection and imperial consolidation—presents an explanatory problem of the first order. There are, moreover, at least three other questions about Chamberlain's post-1886 career which pose similar difficulties: why did he oppose Gladstone over Home Rule? why did he seek minor office in 1895 and refuse the Exchequer? why, after building a weapon powerful enough to kill Balfour, did he fail to pull the trigger in 1905-6?

Jay sees Chamberlain as the creature of ideological persuasion. One is encouraged to observe instead an ambitious and confident politician with an executive streak; this is a Chamberlain who is seeking to do great things as he once did them in Birmingham. Home Rule was intolerable because it would deny Chamberlain the possibility of creating the "social politics" he had identified as the best *modus vivendi* for a post-Whig Liberal party. His failure to wrest the direction of Liberalism from Gladstone's grip morose. He married again; and after 1888 he found a new sense of urgency in seeking to pull the Conservative party towards a more positive understanding of policy. But in 1895 he was still widely mistrusted among Salisbury's supporters and suffering personally from one

of his fits of depression and loss of confidence. The Colonial Office (which Gladstone had refused him in 1886) offered a realistic foothold from which he could consolidate his status without exposing himself to the intra-party heat of the Exchequer chair. The new vantage point doubled also helped Chamberlain along his tariff reform road, but it was the impending retirement of Salisbury which most exercised his highly political mind and suggested the possibility of trying new paths. With the failure of his hopes for an Anglo-German alliance the moment seemed right. "As always in such circumstances, Chamberlain's instincts were to overturn the table and start a new game with fresh rules and higher stakes".

He was already in his mid-sixties; and possibly what ensued is best seen as a failure of nerve. Certainly he had drawn all the right cards in his new game: by 1906 the position of the tariff reformers within the Conservative party had become pivotal. But the Chamberlain of 1906 was not the man of 1886. Before the stroke finished him politically, Chamberlain had already decided he was too old to reconstruct Conservatism in his lifetime.

Chamberlain's story is told here with authority and conviction. A concluding essay reminds one that the author has been a political realist all along (a suspicion first foisted in the narrative which is sometimes "uncomfortable" and over-dense) by considering Chamberlain the phenomenon. Some of the evidence is escapes, partly because the archival base on which the book rests is thin—we hear little of what other major actors are privately recording of Chamberlain's activities—and partly because of its very inaccessibility. Chamberlain is better served, for all that, than he has ever been before in this valuable introduction to one of Westminster's most mystifying men.

Michael Bentley

Dr Bentley is lecturer in history at the University of Sheffield.

Social purity

Prostitution and Victorian Social Reform
by Paul McHugh
Croom Helm, £12.95
ISBN 0 85664 938 4

Prostitution and Victorian Society: women, class and the state
by Judith R. Walkowitz
Cambridge University Press, £15.00
ISBN 0 521 22334 2

One of the most dramatic yet unfamiliar campaigns of Victorian England was that which, from the late 1840s to the mid 1880s, called for the repeal of the 1864 and 1866 Contagious Diseases Acts. The contended legislation was part of an attempt to improve the health and morale of the army in the aftermath of the Crimea, and was passed against a background of medical alarm about the increasing incidence of venereal disease among enlisted men.

As a result of this legislation prostitution in the garrison towns of southern England was officially regulated by a system of registration, periodic vaginal examination and, where deemed necessary, compulsory hospitalization enforced by the Metropolitan police and the military authorities. This system was based on European models of state-regulated prostitution, and advocates of the Acts confidently anticipated the extension of the legislation to Britain's civilian centres of population. There was little opposition to the Acts at the time of their passing. It was not until 1869 that a public campaign for their repeal was mounted, and from then on the agitation was constant and intense. By the 1880s the repealers had captured the support of the bulk of the Liberal Party; in 1886 the legislation was wholly rescinded.

Until the appearance of these two studies, little in detail was known about the character and dynamics of this campaign and still less about the object of the legislation, the Victorian prostitute. So far as the agitation was known about at all, it was associated above all with the name of Josephine Butler and as such assigned a respectable place in the pre-history of the late Victorian women's movement. In recent years, it has also sometimes been aligned with the agitation against compulsory vaccination and thus classified with other pressure groups contesting the growth of state intervention in the domain of public health. Neither of these identifications is misplaced, but as unraveled in these two books, the story emerges as a much more complex and extraordinary one, of central importance in the constitution of late Victorian positions on morality, the state and the place of women.

What both McHugh and Walkowitz succeed in demonstrating in different ways is the diversity of impulses and ideologies, the temporality and precariously concealed benevolence, the apparent simplicity of a single issue campaign. Josephine Butler did campaign against the Acts upon feminist grounds, pointing out that the legislation blatantly incorporated a double standard of morality. Working-class women deprived of other means of employment were publicly degraded by humiliating interrogation and examination conducted by male policemen and doctors, while their male clients were to be exempt both from inspection and from responsibility for the possible medical consequences of their actions. As the first public and independent intervention of women in the political life of Victorian England, the audacity and courage of the campaign waged by Butler and the Ladies' National Association still seems astonishing. Politely lobbying for the admission of women to higher education, the professions or the suffrage fit comfortably with our

Gareth Stedman Jones

Dr Stedman Jones is a fellow of King's College, Cambridge.

The impact of oil

The North Sea Oil Panel was set up by the SSRC in 1975 to promote research into the social, economic and political impact on Scotland of North Sea oil developments. It has now published three occasional papers on its findings: *Social Change in Durossness: a Shet-*

land study, by Reginald Byron and Graham Macfarlane (£1.80); *Oil and the Scottish Voter 1974-79*, by William Miller, Jack Brand and Maggie Jordan (£2.80); and *North Sea Oil and the Aberdeen Economy*, by G. A. Mackay and Anne Moir (£2.80).

BOOKS

The reality of witches

Witch-hunting, Magic and the New Philosophy: an introduction to the debates of the scientific revolution, 1450-1750
by Brian Easlea
Harvester Press and Humanities Press, £25.00 and £8.50
ISBN 0 85527 908 7 and 0 391 01806 X

Within the seventeenth century lie (roughly) the origins of modern science, of the modern "scientific" way of viewing the world, and of the modern socio-economic system. How are these related? The perennial debate has been enriched by Brian Easlea's survey. He finds a new "bourgeois" class at the root of scientific change, as have others before. But he makes a new move in defining it by its self-confident appropriation of all lesser beings around it: Nature, colonials, the poor, women.

Establishing the plausibility of this thesis requires a wide-ranging study; Easlea concentrates on his own field—that of the history of science—in which he can build on the matured scholarship in that field, which has definitively disproved the legendary accounts of Great Scientists doing Experiments to rout the forces of Religious Dogma and Magical Superstition. We know that Galileo and his colleagues were pioneers, indeed prophets, who had to go beyond what they could strictly prove in the course of their struggle for new ideas. We know too that some great scientists—such as Gilbert, Harvey, perhaps even Newton—inhabited a world partly of a "pre-scientific" sort, where the "dissociation of sensibility" had not yet occurred. So the connexion between the origins of our modern natural science and of our modern "scientific" world-view becomes more open and challenging.

With a boldness that any other professional historian of science might find rather risky, Brian Easlea takes on the big questions and grapples with them. He wants to see whether (as in the version accepted hitherto) the triumphs of the new experimental science were really the cause of men adopting the new, disenchanted philosophy of nature; or whether other sorts of influences were at work. His path of entry, witch-hunting is an unexpected and difficult one, for no seventeenth-century scientist of note

ever pronounced upon the reality of witches. Yet it is striking that the acceptance of the "barrenness of nature" (Easlea's description of the new world-picture) was very closely associated with the rejection of witchcraft, among the educated elite. In the later seventeenth century, Was it cause-and-effect, or the reverse consequences of a common cause?

Before elucidating that possible cause, Easlea must describe the scene which encompasses these two elements. For this he must range from technical science, through speculative philosophy of nature, to religion and magic, not overlooking the struggle of the lower classes and the subjugation of women.

Working through all this may be compared either to tracing threads in a tapestry or to stirring lumps in a stew. Easlea has no time for exhaustive reviews of materials from primary sources, or for surveys of context or "background". Generally he reviews books, and tells us what he finds interesting there. The assessment of quality will depend on the reader's own criteria for this sort of inquiry. For professional historians of science, its speculative character may result in its dismissal as hasty and unsound. But as an honest statement of a new and challenging theme, Easlea's work deserves serious attention.

Hitherto historians of seventeenth-century science have tended to judge that century of genius by hindsight, and to assume that the scientists and their public knew that their endeavours heralded the start of a triumphant career. Easlea questions this transfer of present certainties to the past. He shows systematically how all of the new "atomistic" or "corpuscular" mechanical philosophy was both plagued by insoluble internal contradictions and interpreted and indeed pursued with ideological and ultimately political issues in play. If we want a twentieth-century analogue to seventeenth-century science, economics is far more fruitful than physics.

So simple a phenomenon as the weight of bodies was a perennial embarrassment; any theory which related it to rotation (of the Earth or of vortices) conceived it as being directed to the Earth's axis rather than to its centre; and Newton's "gravity", while technically brilliant, was widely seen as

a throwback to "occult qualities". No corpuscular explanation of magnetic phenomena was ever half as plausible as Gilbert's "world-soul". And in the life sciences, the phenomenon of inheritance caused confusion and distress among philosophers down the generations, through the eighteenth century.

The real steady change through the seventeenth century was in its world-view. At the beginning, it was plausible that there were angels, astral forces, fairies and witches. By the end of the century, among educated elites in north-western Europe, it had become implausible. Only against this profound shift in common sense can we understand the changing arguments about natural philosophy, and their ideological implications. Critics of witchcraft once had to accept the reality of the prodigious events, and attempted to explain them by an enriched "natural" order. Later, however, they needed only to admit that some (not even all) supposed witches believed in their fictitious activities. And by the end the whole affair of witchcraft was relegated to the realms of fools and imposters, beneath the notice of the guardians of law and order.

As this process of "disenchantment" goes underway, some philosophers feared its consequences for religion, ideology and politics. Thus we have the embarrassing phenomenon of a prominent apologist for the Royal Society, Joseph Glanville, retelling stories of ghosts and witches in order to defend the existence of an immaterial soul against Hobbes and his followers.

On the sudden emergence of a new anti-feminine sensibility, or of new styles of class oppression, Easlea is less convincing. On the decline of witch-hunting (already well chronicled by others) he is not yet satisfactorily explained he can adduce a coincidence that may be significant. After the end of legal action against witches, came the start of laws against industrial sabotage. For Easlea, this nearly marks the arrival of modern times.

J. R. Ravetz

J. R. Ravetz is reader in the history and philosophy of science at the University of Leeds.

On the nature of inquiry

Conceptions of Inquiry
edited by Stuart Brown, John Fauvel and Ruth Finnegan
Methuen/Open University Press, £10.00 and £4.50
ISBN 0 416 30210 6 and 30200 9

This book is a collection of readings on the nature of inquiry, from Plato to Foucault. Part one is concerned with "mainstream" and "alternative" conceptions of inquiry; part two with questions of scientific method and progress; part three with the appropriateness of natural science methods to explaining human action; and part four with more general issues about the existence of distinct forms of knowledge and the roles of objectivity and evaluation in inquiry.

The book is "one part of an Open University integrated teaching system and the selection is therefore related to other material available to [Open University] students". But since it is also addressed to "a general readership" and presumably to other students who do not have access to the related material, the book must be assessed on its ability to stand alone.

It is a collection of good material. But is it a good collection of material? There are some practical inadequacies, such as the rather thin editorial introductions, and more importantly the complete lack of any guide to further reading. And in spite of the claim that mathematics, natural science, history and social science are dealt with, there is little attention to history—really only Hempel's paper

on explanation and Passmore's on objectivity, both of which emphasize a natural science model for the historian. This imbalance means, of course, that as far as this book is concerned Marx might just as well never have lived, and so such non-British conceptions of inquiry as are found in the German critical school or among French structuralists can be naturally ignored. Only Mary Hesse's excellent paper shows any signs of acquaintance with such "foreign" notions, and even this is marred by rather casual assumptions about Marx and Marxism.

This typically British determination to ignore history is also apparent in the selection of material. Underlying the conceptions of inquiry that are presented is the assumption that inquiry is ahistorical, timeless, and that one can isolate internal methodological differences and examine them free from any sort of social context. Readers are therefore kept away from an important area of contemporary theoretical debate about inquiry. Luke Hodgkin's two pages on the materialist conception of mathematics hardly provides a balance.

But, it might be argued, there is a further important exception: an extract from Foucault's *Archaeology of Knowledge* and an acknowledgment in the general introduction that Foucault rejects the Anglo-Saxon anti-historical assumption. But the treatment of Foucault is significantly inadequate. By giving him four pages (out of 325), in a totally unsympathetic context, any possible contribution he could make is diminished. And by providing him with an editorial introduction that manages to distort and reduce his central concept of "discourse", the fact that perhaps he is not just putting forward a different point of view but is radically challenging the foundations of the rest of the book, is disguised from the reader.

It is also significant that none of the editors felt able to select or introduce the Foucault extract: an adviser is acknowledged here. But the incongruity between producing a book with the title *Conceptions of Inquiry* and a lack of acquaintance with any conceptions outside a fairly limited tradition does not seem to have worried the editors. Is it that they think that the British mind (as they would no doubt call it) cannot grasp what is unfamiliar?

Andrew Belsey

Andrew Belsey is lecturer in philosophy at University College, Cardiff.

Group theory

Finite Simple Groups II
edited by Michael J. Collins
Academic Press, £25.00
ISBN 0 12 181480 7

Ever since the proof of the Jordan-Hölder theorem on the composition series of finite groups, the determination of the finite simple groups has been regarded as one of the fundamental problems of group theory. Even the list of known simple groups did not look reasonably complete until a paper by Chevalley in 1955 gave a systematic construction for them. The same system yielded more groups over the next few years (the twisted types), but the real surprise here was the repeated discovery of sporadic simple groups. Like snowfalls in England, each one came as a surprise.

The problem is, then, to show that every finite simple group is on the list we now have. Burnside and Frobenius had obtained some basic general theorems pointing in the right direction, but the first important step in giving characterizations of some of the known groups was taken by Zassenhaus in 1938. The war held things up, but by the late 1950s, Brauer and his school had got things going again. Then came Thompson, whose work in the early 1960s initiated the frenzy of activity that has been going on ever since. The result has been a torrent of literature from scores of mathematicians, creating almost a separate branch of finite group theory, with its own definitions, techniques and even jargon: "Mr X has been able to prove that this subgroup has certain p-embedding properties in groups of characteristic so-and-so-type." If the old theory can be compared with the skyline of Dresden, the new one corresponds to that of Lower Manhattan.

In 1969, a conference on the subject was held in Oxford and the proceedings published as *Finite Simple Groups*. This book consisted of a number of papers, many of them complete with proofs, and was an up-to-date account of the theory as it then stood. The present volume does the same for the year 1978, although almost all the articles are expository. The introductory chapter, by Michael Collins, is an excellent survey of the classification project and gives the reader his bearings in the subsequent sections. Seitz describes the progress made, following Aschbacher's component theorem, on groups having a standard subgroup of known type, and Solomon discusses the *B(G)*-conjecture. Next come groups of characteristic 2 type. This leads to groups of *CF*(2)-type and quasi-thin groups. Griess's article on odd component problems takes off from that of Gorenstein and Lyons. Two chapters on pushing-up conclude the part of the book on classification theory. Throughout, the importance of the *N*-group paper of Thompson in the 1960s and of the work of Aschbacher in the 1970s impresses the reader. The next part of the book is on the representation theory of groups of Lie type, and the final part is on some geometrical aspects. It is a pity that there is no index.

Rumour has it that the problem is now solved, but checking the details has been described as a daunting task. However, as a collective mathematical effort, this is an astounding intellectual achievement that will give students of group theory a great deal to think about for many years to come.

Norman Blackburn

Norman Blackburn is professor of mathematics at the University of Manchester.

The only handy, affordable guide to the key reference sources for the whole field of human knowledge

A. J. Walford's three-volume *Guide to Reference Material* has for many years been the reference librarian's *vade mecum*. Now, with the publication of the concise edition, this comprehensive critical guide is available in a handy format, at a price to suit the individual. *Walford's Concise Guide to Reference Material* retains all the features that have made the full edition such a valued reference tool:

- ★ original and succinct critical annotations
- ★ key, authoritative review quotations
- ★ full bibliographic references
- ★ vast range of publications included
- ★ clear system of headings, sub-headings and cross-references
- ★ overseas and foreign language texts included

Walford's Concise Guide to Reference Material is tailor-made

- ★ for individual researchers, providing them with a perfect springboard for the initial stages of their work
- ★ for librarians in smaller libraries, where limited space and funds restrict the scope of reference collections
- ★ for students needing to discover and consult the authoritative sources for the subjects of their studies

434 pages ISBN 0 85365 882 X
£14.75 to 30 September 1981; £17.50 thereafter

LA Library Association Publishing

To: Publicity Department, Library Association Publishing, 7 Ridgmount Street, London WC1E 7AE

Please send me a fully descriptive leaflet for *Walford's Concise Guide to Reference Material*.

Name.....
Address.....

BOOKS

Access to computers

TRS-80 BASIC: a self-teaching guide
by Bob Albrecht, Don Inman and Raman Zamora
Wiley, £5.95
ISBN 0 471 06466 1

Introduction to Computer Data Processing with BASIC
by Margaret S. Wu
Harcourt Brace Jovanovich, £11.00
ISBN 0 15 541 638 3

BASIC was developed in the mid-1960s in response to the utter awfulness of trying to use a large computer system for teaching non-specialist students. It was part of the Dartmouth Time Sharing System, an innovative system that embodied such heresies as giving students free access to the computer, and saving the time of the user even if it seemed that the computer was being "wasted". (Only those who were around at the time can appreciate quite how heretical such concepts seemed to those steeped in the "traditional" ways of batch processing. Indeed, there are still some university computer centres where such ideas are regarded as dangerously radical.)

The educational value of the approach soon became apparent, and BASIC rapidly established itself as the preferred language for introductory computing teaching. The language was simple to learn and teach. In addition it was simple to implement, and did not demand large computing resources. It was thus a natural language to adopt for the new generation of "personal" microcomputers.

Being the brain-child of two American professors, published in the open literature, there was no mechanism for controlling the proliferation of the language, and unfortunately every microcomputer manufacturer who adopted BASIC implemented a slightly different version. Thus "TRS-80" BASIC is

exactly that: a guide to BASIC on the Tandy TRS-80 microcomputer. If you use a different computer, then the book may not be quite so useful to you. (Don't be confused by the references to "Radio Shack" in the book, that is just the trade name used by Tandy in the United States.)

The book is a "self-teaching guide" and starts off at a very elementary level, with a drawing of the TRS-80, with names attached to each of its components. This is immediately followed by a self-test question: "What are the four parts of the TRS-80 computer?" (This is presumably there to test the ability of the student to read the captions on the figure.) The exposition proceeds at a very gentle pace but is admirably clear, every step being illustrated by pictures and diagrams of the screen, annotated to show what the computer typed and what the user typed.

There are frequent "self-test" questions, to test comprehension: it is a pity that the answers usually appear immediately below the questions, making it all too easy to cheat. The clarity of exposition is maintained as the features of BASIC are explained: examples used to illustrate features of the language are well chosen and will engage the interest of the reader. A comprehensive set of appendices cover a variety of details of the TRS-80. Although the authors' colloquial style may jar at times, this is an excellent companion to the TRS-80, well worth purchasing by a school or college that has one of these machines.

Introduction to Computer Data Processing with BASIC is a completely different kind of book, a typical US college text (University of Iowa) that takes us right back into the mainframe world of punched cards and batch processing. The title is misleading: it gives the impression that BASIC

will be used as the teaching vehicle, and the reader may well be surprised to discover that BASIC does not appear until chapter 13, more than half way through the book. Even then, it doesn't seem to figure again in the remaining seven chapters of the book. The explanation can probably be found in the fact that this book is based on the author's earlier *Introduction to Computer Data Processing*, and has had newer material grafted on.

The early chapters give a very traditional treatment of data processing (who wants to know about card-sorters and plugboards nowadays?), firmly rooted in mainframe philosophy. Minis and micros get a chapter, and many other modern developments are mentioned, but although all the right things are said, one still gets the impression that the author's heart is in the traditional mainframe; somehow she conveys the impression throughout that that's what *real* computing is about.

In addition to the thorough coverage of hardware, and the less thorough but adequate coverage of software, the book includes less usual topics including management factors, social implications and history (mostly from an American standpoint). These latter areas are illustrated by extracts from the press (both popular and technical) which form a novel and welcome addition to the book. The production is superb: well designed and printed and profusely illustrated with photographs, diagrams and cartoons. Although the contents have been carefully tailored to the syllabus of the typical American college, the British teacher should examine the book carefully.

D. W. Barron

D. W. Barron is professor in the Faculty of Mathematical Studies at the University of Southampton.

Modern physics

A Modern Course in Statistical Physics
by L. E. Reichl
Edward Arnold, £20.00
ISBN 0 731 2789 9

To say that statistics is relevant to physics because all measured quantities are subject to uncertainty is true, but the statement conveys only the meagre hint of the nature of statistical physics. Physics, by its very essence, is concerned with fundamentals in the sense that it ultimately seeks to base its explanations on concepts and principles formulated in relation to the properties of energy and matter at the level of their fundamental structural units. Yet, the everyday physical properties we observe are the results of the combined actions of enormous numbers of such elementary structural units. Statistical physics is concerned with bridging the gap between macroscopic behaviour and microscopic principles.

This description correctly portrays statistical physics as relevant to all branches of physics. It shares this universality with classical thermodynamics, but the disciplines differ in that statistical mechanics builds on microscopic models, whereas classical thermodynamics is concerned only with developing relationships between macroscopic quantities. Therein lies its strength.

With such universal applicability, there are many ways of exposing statistical physics, and this presents special difficulties to a lecturer or author. Should he attempt an exhaustive exposition, trying to include some account of all significant branches and applications, or should he be selective, developing the subject in relation to particular areas only? The choice is inextricably linked with the decision about the intended consumer: is the account for those who will specialize as professionals in the discipline or is it intended to provide an everyday working ability for those whose interest lies primarily elsewhere? If it is the former, then the full theoretical apparatus of the subject must be set out; if it is the latter, then simpler techniques are often adequate.

Reichl sets out to write an exhaustive account of modern statistical physics. The text falls into four main sections: classical thermodynamics, which is required for handling the statistical results; probability theory and the foundations of statistical mechanics; and equilibrium statistical mechanics; and

non-equilibrium thermal physics and hydrodynamics. By following the subject-matter through to include recent developments in such areas as ergodic theory, non-linear chemical physics, stochastic theory, quantum fluids, critical phenomena and transport theory, the text becomes very advanced, and the book becomes long (some 700 pages). The exposition also becomes highly compressed. For example, non-interacting Fermi fluids are allowed a mere four-and-a-half pages where standard formulae for such quantities as the heat capacity are deduced, but there is no discussion of how these results relate to real substances. What is the Fermi energy in a typical metal and how does it compare with typical thermal energies? The properties of real materials depend critically on the answers to such questions. Indeed, throughout the text there is scarcely any reference to the magnitudes of real physical quantities nor any discussion of how well the theory agrees with experiment. One feels that the subject is set out in appreciation of its internal structure rather than to show its usefulness in relation to the real physical world. Why is there no mention of applications to semiconductor physics, for example? For a book which purports to be interested in modern developments, one would at least expect some reference to recent applications - astrophysics, for example.

Reichl states that he avoids unnecessary mathematics, and at the beginning of chapters and sections there are excellent overviews of what is to be done in the following text. However, when it comes to the theory itself, the development is unremittingly formalistic. His minimum of formalism is no less than the full theoretical apparatus which a researcher in the field might need. The book can therefore only be described as an advanced research level text. For those working in the field it is doubtless an excellent reference book but it is not suitable for undergraduate use.

In a forward, Ilya Prigogine likens the scope of Reichl's book to that of the classic text of Fowler. Personally, I would not expect Reichl's book to achieve that status, but time could prove me wrong.

C.J. Adkins

C.J. Adkins is senior lecturer in physics at the Cavendish Laboratory, University of Cambridge.

Applying matrices

Matrix Methods for Engineers and Scientists
by Stephen Barnett
McGraw-Hill, £3.95
ISBN 0 07 084084 9

Engineers and scientists are often deterred from sampling the delights of matrix theory. This generally arises from the tendency to teach it as an abstract discipline, without reference to motivations or applications. Barnett's book is a successful attempt to remedy this situation by mixing in applications with the theory, and by introducing concepts gradually by way of simple examples. The result is a highly readable book on matrices, suitable for undergraduates in engineering and science. Postgraduates will also find the exposition helpful, especially if they have bad memories of their early instruction in the subject. The style is pleasantly relaxed, yet not mathematically loose.

The material is mainly standard, covering basic matrix properties, rank and the solution of linear equations, eigenvalues and eigenvectors, quadratic forms, and functions of matrices. However, additional topics are included, such as the companion matrix and the Kronecker product, which are often left out of elementary books. An eye is kept on computational aspects of matrices, and (a sign of the times) exercises are set which require the use of a pocket calculator. Proofs of theorems on determinants are omitted, a reason-

able decision as most readers will already have some familiarity with determinants. There is an insidious trend in modern mathematical books to put much of the development, including whole theorems, in the exercises. In extreme cases the students then find he has to write half the book before he can read it. Fortunately, this tendency occurs only to a slight extent in the present book. But rather too many of the definitions appear in the exercises, where they can easily be overlooked by any reader in a hurry.

One way to reduce the abstractness of mathematics is to give some account of the historical development of the subject. This approach is not used in the present book; perhaps because the history of matrices still seems obscure. The history became confused as a result of the slapdash early development of the theory at the hands of nineteenth-century algebraists, such as Sylvester.

Apart from the minor criticism noted above, the book is a model of lucid exposition. It contains copious and nicely judged examples, and will enable engineers and scientists to absorb the basics of matrices nearly as painlessly as possible.

A. T. Fuller

A. T. Fuller is reader in control engineering in the department of engineering at the University of Cambridge.

BOOKS

A judge of character

Justice, Lord Denning and the Constitution
by Peter Robson and Paul Watchman
Gower, £10.50 and £5.95
ISBN 0 566 00399 6 and 00454 2

One of the editors of this collection of essays on Lord Denning suggests that "There exists a taboo against public reference to the judiciary in any terms other than those of unqualified admiration". If there is such a taboo it has not been very effective and many people (including the present leader of the Labour Party) do not seem to have heard about it. So perhaps the eight contributors to this symposium run no great risk in not allowing it to inhibit their assessment of Lord Denning's judicial performance. The authors speak of their work as a venture "into alternative legal discourse", though without explaining in what way it differs from non-alternative discourse.

In fact a number of the essays examine in a clear and not noticeably alternative style Lord Denning's approach to the judicial role, particularly in relation to the application of the rules of natural justice, the exercise of discretionary powers by ministers and the rules of precedent and statutory interpretation. As to natural justice, little consistency is seen. On the face of it, more success seems to have attended the claims of taxi-drivers and town-planning appellants than those of immigrants and students, and it is a reasonable question whether the difference can be explained entirely by reference to the different needs of municipal administration, planning control, immigration policy and higher education. Certainly fairness in administrative law has become a thing of many colours and shapes, some of them unpredictable, though others besides Lord Denning share the responsibility for that.

As to ministerial powers, it can be made to appear that Lord Denning is on occasion hard and on occasion soft. In *Schmidt v Home Secretary* and in *Ex parte Hosenball* ministerial discretion is seen to be upheld and not minutely examined. In *Pudfield v The Minister of Agriculture*, in the *Laker Airways* case, and in the *Rossminster* tax case ministerial discretion is closely scrutinized and contested. The implication is that judicial restraint evaporates when Lord Denning perceives the minister's policy as oppressive or unreasonable. That, if it were so, would not be entirely surprising. *Congreve v Home Office* is an example and is cited here as an illustration of Lord Denning's failure to explain the legal basis on which he is acting when overturning an honestly exercised ministerial discretion. Whatever the merits of the decision that criticism seems less than fair since in *Congreve* Lord Denning argued at some length that the ministerial power (to revoke television licences) was being used for a purpose other than that for which it had been conferred and in effect to levy tax without parliamentary approval. The asserted grounds of the decision were certainly explained and it perhaps might be added that the view taken of the minister's use of his powers was one shared by the Parliamentary Commissioner for Administration, not to say a large number of licence holders.

In the matter of statutory interpretation, the coherence of Lord Denning's attitude over the years is certainly open to criticism and has received it from both judicial and academic quarters. One of the weaknesses is the contrast drawn (most recently in cases such as *Nottingham v Barts LBC*) between the "literal" and the "purposive" approach to statutes and its relation to the judicial strategy of avoiding absurdity or injustice. It is just to be done in particular cases the true purpose and intention of Parliament may need to be ignored rather than promoted. Indeed it unashamedly has been ignored when Lord Denning, together with some members of the House of Lords who promote the "purposive" approach, have in effect nullified out-

standing clauses in statutes that had a reasonably clear parliamentary intention behind them.

There can perhaps be seen among the critics of Lord Denning in this collection two different theses, a milder and a stronger. The milder view is that Lord Denning's view of the judicial role has been insufficiently buttressed by arguments of principle and that, containing implicit inconsistencies, it leads to unpredictable results. The less mild view is that in addition to this Lord Denning is the upholder of the morality of the ruling class and that his judicial behaviour represents the application of a political philosophy "close to that of the right wing of the Tory Party". Those who favour the second thesis have an interesting way with hard cases. Those occasions on which the Master of the Rolls has upheld the rights of those not usually favoured by the political right wing of the spectrum of public opinion - such, for example as homosexuals, alleged pornographers, illegitimate children or deserted wives - are not treated as refuting the thesis. Rather they simply underline and throw it into still greater relief. Thus the cases that fit the theory illustrate it, while the cases that do not fit it "underline" it.

In respect of sexual mores, perhaps it may be conceded that Lord Denning can usually be relied upon to underpin the moral fabric of what in alternative legal discourse are called the "dominant forces within the social formation". One of the contributors notes that "When considering artificial insemination of women in the House of Lords, Lord Denning felt compelled to say that... 'if this practice becomes widespread it would strike at the roots of our civilization'". Apart from that, it would, one feels, make even the protagonists of alternative legal discourse discourage their wives from visiting the House of Lords unaccompanied.

Geoffrey Marshall

Geoffrey Marshall is a fellow of Queen's College, Oxford.

Time off for bad behaviour?

Sentencing
edited by Hyman Gross and Andrew von Hirsch
Oxford University Press, £12.75 and £6.50
ISBN 0 19 502763 9 and 502764 7

It would be comforting to think that this book will have a wide appeal, that it will be read by not only those involved in the sentencing process, but by all of us who recognize that serious crime poses a grave threat to the quality of our lives. It is a compilation of writings from more than a generation of scholarly studies, mainly but not exclusively American. The aim as stated in the preface is to provide an intellectual environment for further discussion that will allow all points of view their best expression. One of the work's major contributions is the note on sources at the end of each selected writing, with additional suggestions for further reading on each topic.

The question is, what to do with those who break the law? Rehabilitation, incapacitate or deter? Incarceration itself was at one time regarded as rehabilitative, and lengthy prison sentences were approved by reformers so that prisoners had time to work their cure. Now it seems generally recognized that incarceration does more harm than good, that long-term confinement even under ideal conditions destroys an inmate's ability to function in society. Emptying the prisons seems now to be the goal of reform. Views range considerably from those who take a sceptical view of rehabilitation but cannot decide the length of sentences, to those who think that all we have to do is take out of circulation the dangerous and intractable people among us. Recently, interest in the idea of just desert has revived and become an important focus of debate.

Is it, however, simply a balancing of all the considerations: rehabilitation, predictive restraint, deterrence and desert; or are we bound inevitably to have only the personal views of the sentencing judge, whose views may or may not be widely shared in the community? Perhaps the ultimate justification for any punishment is not its deterrent or rehabilitative value, but the emphatic denunciation by the community of the crime.

Who should decide the length and shape of a sentence? Should all sentences be indeterminate and release be left to the executive? Should we control the judicial discretion in this area by precise legislative statements of the appropriate sentence for each crime? Should the legislature be the body to set the standards? Does the democratic theory compel us to choose the legislature as a standard-setter or may the legislature delegate its rule-making powers to another agency, a specialized non-elective body not under the same political pressure? Legislatures may well be ill-suited to drafting sentencing standards; debates about punishment tend to be influenced by the fact that many voters fear crime and criminals and there are always strong incentives to inflate penalties to demonstrate tough attitudes on crime to the electorate. The writings contain considerable discussion on the setting up of a commission on sentencing, whose principal task would be to write and monitor sentencing standards; resulting in fixed terms with time off for good behaviour and a restricted discretion in the trial judge to vary sentences for aggravating and mitigating circumstances. What then should be the role of the Parole Board or should parole release be eliminated entirely? If the actual time served is set, there may be no need to continue the present lengthy fictitious sen-

tences with shorter actual times served because of parole release.

The studies seem to indicate a clear consensus on the inherent defects of incarceration. It is not enough to say that humane containment is all we need achieve; we should be limiting the period of containment. In the last two hundred years of reform, there has actually been very little change. Is it not time, therefore, to accept our failures to accept that we do not know how to rehabilitate offenders and forget the grandiose ideals of eliminating crime? Perhaps all we should be trying to do, having accepted failure, is to seek a system in which there is a dramatic shortening of sentences and less state intervention in cases such as prostitution, gambling, drug use, and so on. Would underwriting crime insurance for all victims with state funds be any answer?

It is clear that judges indulge quite freely in excessive punishment, resulting in considerable inconsistencies. In no other area of law are legal standards less developed and yet the consequences more momentous. Furthermore, this abuse of power allowed to a sentencing judge is often concealed in many respects by the administrative facilities of a modern criminal justice system. The reports and recommendations provided to the court are used to create an appearance of regularity and equality in sentencing.

If we are resolved to do something about the crime problem, the immediate thing we must do is call a halt to the building of new prisons and training schools, at least for a time, while we plan and develop alternatives.

Jill Spruce

Jill Spruce is lecturer in law at the University of Bristol.

Oxford University Press

Constitutional Theory

Geoffrey Marshall

'The author has maintained the very high standards which we have come to expect from the Clarendon Law Series.' *Cambridge Law Journal*. This paperback reprint replaces the boards edition of this book, in which the basic ideas underlying the Anglo-American system of constitutional government are introduced and examined. Paper covers £4.95

The European Convention on Human Rights

Francis Jacobs

'One of the most comprehensive and informative writings published to date on this important area of international law.' *Millenium*. This book, now available in paperback, sets out the substantive law of human rights under the European Convention of Human Rights, and analyses the novel system of supervision operated by the European Commission, the Court of Human Rights, and the Committee of Ministers of the Council of Europe. Paper covers £6.95

The Concept of a Legal System

An Introduction to the Theory of Legal System

Joseph Raz

'It is a work of major interest and importance which opens up a whole range of new and fascinating topics in analytical legal philosophy.' *Philosophical Quarterly*. For this second edition of this important essay on jurisprudence, Dr Raz has written a postscript in which some of the central themes of the book are restated and examined. Second edition £8.95 paper covers £3.95

The Contract of Employment

Mark Freedland

'The analysis is coherent and satisfying, the fundamental principles underlying the law are brought out, appropriate solutions to old problems and new doubts are persuasively suggested, and, above all, at the end of the book one feels simply that one has an intellectual understanding of something that was previously at best only dimly perceived.' *British Journal of Industrial Relations*. Paper covers £7.50

Doing Feminist Research

'Behave like a gentleman, keep off the women, take quinine daily and play it by ear.' Evans-Pritchard's advice on doing sociological research can no longer be followed. *Doing Feminist Research* is a timely account of work undertaken by sociologists who have been influenced by feminism or the feminist critique of sociology.

Bill Jordan's new study challenges the theories behind monetarism and social services cuts. 'What a treat to read a book on Britain's economic troubles which at least propounds a new thesis!' - *Barbara Wootton* writing in the *Guardian*. 'Could have been sub-titled "True Grit".' *Claire Tomlin* in the *Sunday Times* reviewing *Images of Ourselves*, she continued 'any one of these 24 short autobiographies of girls and women afflicted with paralysis, blindness, epilepsy or palsy might draw horror, pity, amazement and admiration.'

Doing Feminist Research

Edited by HELEN ROBERTS

Contributors: Lynne Chisholm, Christine Delphy, Catherine Llewellyn, David Morgan, Ann Oakley, Joyce Pettigrew, Helen Roberts, Dale Spender and Diana Woodward
Paperback 0772 8 £4.95

Automatic Poverty

BILL JORDAN

0824 4 £3.75 Paperback 0825 2 £4.95

Images of Ourselves

Women with disabilities talking

Edited by JO CAMPING

Paperback 0822 8 £3.95

ISBN Prefix: 0 7100

Routledge & Kegan Paul, 39 Store Street, London WC1

RKP

BOOKS

Diminished responsibility?

Psychology and Law: can justice survive the social sciences?
by Daniel N. Robinson
Oxford University Press, £8.50
ISBN 0 19 502725 6

Daniel Robinson's mission is to lay siege to the contributions of the psychologist, psychiatrist and sociologist in the legal process. In a relentless argument, he concludes that the social sciences have failed to yield a set of scientific laws or even any assortment of reliable measures, and that the courtroom is assailed by a plethora of mere opinions masquerading as facts. The "expert", he states, should now be relegated to the status of character witness and not treated as a purveyor of truisms concerning human motivation and behaviour. Robinson is even more concerned that this "flood of narrow specialities", when used in the judicial process, is gradually whittling down the concept of justice itself. The encroachment of the social scientist into the domain of ethics signals, he believes, the beginning of Armageddon, with the odds stacked on the side of evil. His final scene depicts the concept of justice being usurped by, or the law abdicating justice to, the psychosocial perspective.

The consequence of this process, he argues, is incoherence or contradiction in a range of legal issues. Insanity as a defence, decisions about the mental capacity of testators, committing people to asylums and problems concerning abortion and euthanasia, all manifest the unholy influence of the social scientist and the concomitant erosion of justice.

Apparently, it is in the case of insanity that the debasement is most discernible. Because of the lack of expertise in the "experts", the courts, with circularity, argue that the accused's act is the result of "disease of the mind" but

that the presence of disease is shown by the act itself. To counter such an argument Robinson suggests that the defence ought to be confined to the "wild beast" test, where the accused is mentally indistinguishable from an infant or a wild beast. To expand these grounds may be defensible, but the expansion must be at the cost of what for centuries has been taken to be the very foundation of justice. Many would balk at the startling frankness of this ungenerous argument. Surely the issue is not that something has counted as the foundation of justice for centuries but what ought to count. Again, while it is true that American courts have interpreted the defence widely so as to include cases in which the accused thought his action morally right although he knew it to be legally wrong, in this country it all depends on knowledge of legal wrongfulness: "the mere fact that a man thinks he is John the Baptist does not entitle him to shoot his mother" is the brutal opinion of Lord Hewart.

Abortion is another storm area where Robinson claims that the unwarranted intrusion of the social scientist is crippling the notion of justice. But his discussion does not take account of the sort of arguments that start with the promise that a foetus is a person. As Judith Thomson argues, from this premise it does not follow that it is always wrong for the mother to terminate its life. Surely, it is better to consider relevant circumstances and consequences when attempting just action, rather than simply to adhere blindly to what one considers to be a just precept.

The ultimate question is, what is Robinson's conception of justice which is being overrun by the social scientists? To him, what transforms a mere desire into a "genuine moral conviction" is the belief that the state of affairs in question would be good for all persons at all times.

However, any crank can universalize any deluded proposition. To counter this, Robinson presupposes we start off with a knowledge of right and wrong. He admits with "cheery candour" that we cannot identify the source of this knowledge of goodness, but simply if we already know goodness, what is the point of the process of its universalization? If, after much agonizing, I determine on what I ought to do when confronted with a moral problem, there is nothing in the meaning of "ought" which commands me to accepting as a corollary that anyone else in a similar case ought to do the same. In moments of severe introspection, it would be logically absurd to say I must give a reason why I have so decided which would apply to everyone else when similarly confronted.

However, after university wishes into "oughts", the rules of justice make the development of a society's moral code members obligatory by analogy to the common moral reasoning of the citizenry. So justice is the process of organizing conduct as the most rational people. It follows that justice will have a valid content. But whose "genuine moral convictions" are the most rational? Robinson suggests those who he thought most about the issue of "come closer to perfecting our reasoning". The argument seems to evolve this way: why is a certain action unjust? Because the most rational people say so. But who are the most rational people? Those who say this action is unjust.

To sustain Robinson's main thesis that justice is being atomized by the acquisitive social scientist, we could hope for a more persuasive account of morality and principles of justice.

Howard Davies

Howard Davies is lecturer in law at the University of Leeds.

Documenting a new legal discipline

Basic Community Law
edited by Bernard Rodden and Derrick Wyatt
Clarendon Press: Oxford University Press, £12.50 and £4.95
ISBN 0 19 876119 8 and 876120 1

European Community Law and National Law: the irreversible transfer?
by John Usher
Allen & Unwin, £6.95 and £2.95
ISBN 0 04 34107 0 and 34108 9

The impact of Britain's entry into the European Economic Community on our law may be examined from two different perspectives. Within the day-to-day work of the legal profession Community law has turned out to be something of a damp squib. Apart from the highly specialized field of business competition law the impact of Community law in the last ten years has been only sporadic, emerging as an additional weapon in the legal armoury (for example) of those contesting deportation orders or wishing to import Danish pornography.

Within law courses at both universities and polytechnics, on the other hand, EEC law has developed into a thriving optional subject, which has created entirely novel demands on the legal publishers. The initial flurry of works on Community law that emerged to cover the fledgling subject is now being largely superseded by a second generation of books. In the meantime much has happened to shape both the scope and content of the more recently published material. Experience in the handling of Community law problems have been second-hand to Brussels and Luxembourg; and teachers of Community law are

beginning to discover the shortcomings of some of the pioneering works on the subject.

The book edited by Professor Rodden and Mr Wyatt is indeed born of a firm knowledge of where the shoe pinches. It is not enough, they have appreciated, simply to supply students with copies of the Treaty of Rome. That basic document has now been filled out with a mass of secondary legislation which has been promulgated by the institutions of the EEC in order to give flesh and blood to the skeletal guarantees of freedom of movement of goods and workers, social security entitlements, and so forth, set out in the Treaty. A most welcome feature of their collection, then, is the inclusion side by side with the Treaties of Paris and Rome (Eurotreaties rightly being considered of insufficient legal interest) of several of the key directives and regulations issued from Brussels. The two main treaties themselves are reproduced with annotations indicating where amendments (necessitated by the merger of institutions, the accession of new member states, and so on) have taken effect. Added to this the main institutional measures of the Communities (on the holding of direct elections to the European Parliament, for example) and the text of the key United Kingdom legislation, and the result is an invaluable reference work for teacher and student alike.

Mr Usher's work is of an entirely different sort. The sub-title - *the irreversible transfer?* - might suggest that it is a politico-legal tract penned at the behest of a fiction intent on taking the United Kingdom out of the Community and aimed at listing the constitutional and political problems of such a measure. It suggests a work devoted to the thesis that, if accession to the Community resulted in a loss of "sovereignty", the sovereignty in question can be reclaimed and re-asserted. In this respect the qualification to the title is unfortunate. For the book is, in fact, a black-letter lawyer's account of two related aspects of the Community regime. The first part is a discussion of the methods of introducing Community obligations and rights in the internal law of the member states. This brings in the issue of the primacy of EEC law over conflicting national legislation, an area in which the literature in both English and continental languages is voluminous. The second part is concerned to examine the development of Community competence in three fields: the common organization of agricultural markets; the pursuit of common external policies; and the harmonization of national legislation.

The whole enterprise is flawed by the outset by Mr Usher's uncertainty about the level of knowledge (or ignorance) of EEC law he should expect in his reader. At one extreme he gives a detailed account of the *Gend en Loos* litigation, which, if not quite known to every schoolboy, is known to those with even the slightest acquaintance with Community law. At the other extreme the reader is expected to be familiar with several of the technical economic terms and to understand the ramifications of complex litigation in agricultural matters, that most reconcile area of Community law.

Indeed, the pacing of the work as a whole is uneven. The argument in many points is too compressed; in one or two places it errs on the side of too ample an exposition. It may well be that Mr Usher was constrained by length—the work is some eighty pages—in which case work of less ambitious scope would have turned out to be a much more attractive proposition.

Joseph Jaconelli

Dr Jaconelli is lecturer in law at the University of Manchester.

BOOKS

Misleading cases

Cases and Materials on the English Legal System, third edition
by Michael Zander
Weidenfeld & Nicolson, £17.50 and £8.95
ISBN 0 297 77822 6 and 77823 4

The Law-Making Process
by Michael Zander
Weidenfeld & Nicolson, £15.00 and £6.95
ISBN 0 297 77750 5 and 77751 3

Casebooks excite ambivalent responses from law teachers. Are they crabs that absorb students from reading primary sources, or do they force them to read, at least in edited form, what they would otherwise never have bothered to look at? Casebook editors have responded to this in two ways: by diversifying their sources of materials and by adding commentaries and narratives. In the process editors have become authors and the best casebooks are starting to supplant textbooks, in some subjects at least.

It is not surprising that Michael Zander's book on the legal system is enjoying this distinction. His clear presentation of often inaccessible materials, and a rather arid subject in terms of the existing literature, together ensured as much. The third edition continues the format almost unchanged (though some minor matters have been hived off to Zander's new book on the law-making process). In token of its use as a textbook substitute, the author has added some commentary—though not enough, and there is no introduction either to the book as a whole or to individual chapters.

Criticisms of the third edition of *Cases and Materials on the English Legal System* involve not so much what it is as what it is not. To the charge that coverage is unduly weighted towards the criminal side of the legal system,

Zander might legitimately reply that this anticipates students' interests and the weighting of legal system courses. Nor is it his fault that much of the criminal material has been upstaged since publication by the Report of the Phillips Commission on Criminal Procedure. But how would he defend the total omission of discussion of judges (not just what they do but their appointment and independence as well), magistrates, law officers and the legal profession and legal education? Is all the discussion about fusion and the conveying monopoly completely irrelevant?

This is to present the legal system with an almost literal interpretation of the word "system", as a kind of inanimate trifle, all-pervasive and possessed of its own internal momentum, imposing itself on humanity but with no motivating human agency. It is a flaw that has existed since the first edition, but it is now the more apparent since there is no material to speak of, even on judges, in the author's new companion work. It is also a pity, though this is perhaps more a matter of editorial selection, that the Benson Report is relegated entirely to summary references in the author's commentaries, and no use at all is made of the published evidence to the Benson or Phillips Commissions.

Zander's new book also suffers from fundamental flaws of coverage. It is called *The Law-Making Process*, and is intended to complement *Cases and Materials* in covering courses in legal system and legal method. It is not a casebook in any orthodox sense—only 23 cases and one statute are extracted. Rather, it is a hybrid of extended essay and anthology of legal literature, tapping the rich veins of writings by judges and academics on the judicial function to provide the core of materials.

This approach succeeds in presenting a wide range of ideas in a short compass, readably and clearly. As a source book on jurisprudence it has

considerable merit, though if it had been aimed at that market it could usefully have been presented in a more expansive frame. But law teachers must hesitate before letting raw first-year students loose on, for example, an introduction to precedent that deals with the concept of ratios primarily in terms of tips for playing the system. Nor is the eclectic treatment of statutory interpretation much safer ground: presumptions are disposed of in a page, with no illustrations of their application, or of the scope for finding the prerequisite ambiguity in statutory language. It is in the two areas of precedent and statutory interpretation that a casebook would be particularly valuable, if only to expose students to the reality of the issues, but there are just not enough cases extracted at the points where they are needed.

More worrying still is the way that the legislative process is summarily dismissed in a chapter a tenth of the length of the book, half of which is devoted to legislative drafting and the form of statutes. Delegated legislation gets two pages, and the Parliament Act gets nothing, while law reporting manages 16. What kind of an impression of law-making is this intended to convey? Does Professor Zander really want to reinforce the impression of judge-centred law-making which so many courses on substantive law propagate?

On the simple principle that nature abhors a vacuum, *The Law-Making Process* will find its way on to many first-year student reading lists. Students who read it will profit considerably from many of the ideas presented in the materials, but they may be left with a distinctly unbalanced view of how law is made.

Peter Wallington

Peter Wallington is professor of law at the University of Lancaster.

Putting ourselves to rights

Do We Need a Bill of Rights?
edited by Colin Campbell
Temple Smith, £4.95
ISBN 0 85117 205 9

Basic Documents on Human Rights, second edition
edited by Ian Brownlie
Clarendon Press: Oxford University Press, £22.50 and £11.95
ISBN 0 19 876124 4 and 876125 2

Do We Need a Bill of Rights? is the record of a seminar held in Belfast against the backdrop of near-civil war and of the Report of the Northern Ireland Standing Advisory Commission on Human Rights which recommended adoption of such a bill.

The first part of the book is concerned with the general question of whether we need a Bill of Rights and, if so, whether it should be the European Convention on Human Rights, the "we" in question being the inhabitants of the United Kingdom as a whole (although Lord Scarman points out the challenge posed by Northern Ireland to fundamental rights). Part two, on the other hand, is concerned with Bills of Rights in Ireland, and not only Northern Ireland since an analysis by Senator Robinson of how entrenched rights and judicial review have fared in the Republic is included. Part three returns to the Convention itself and contains essays on the machinery instituted for its enforcement and on the question of accession to the ECHR by the European Communities, together with a concluding essay, perhaps more appropriate as an introductory essay, on the alternative kinds of, and alternatives to, Bills of Rights.

It is not entirely clear to whom the collection is addressed—lawyers, politicians or the man in the street. The issue of a Bill of Rights raises two questions: what are fundamental or human rights, and what problems does their protection raise? Given the existing complexity of our legal system the second question is within the lawyer's province to explore. This has recently been done, and probably definitively by Dr Jaconelli in his recent book *Enacting a Bill of Rights*. The tone of the contributions in the present book, on the other hand, is different. Many of the essays are concerned with the content of the proposed Bill of Rights which surely is a political question. One of the attractions for so many of the contributors of adopting the European Convention is perhaps the desire to sidestep this problem. Since the United Kingdom has already accepted in principle the rights the Convention enumerates, the logically separate questions of whether there should be a Bill of Rights and if so what it should contain, can thus be fought as a single battle. However, it is one thing to perform this sleight of hand in an essay and quite another to persuade the politicians similarly to confute the questions. Undoubtedly there is scope for an introductory essay, on the alternative hand, is concerned with Bills of Rights in Ireland, and not only Northern Ireland since an analysis by Senator Robinson of how entrenched rights and judicial review have fared in the Republic is included. Part three returns to the Convention itself and contains essays on the machinery instituted for its enforcement and on the question of accession to the ECHR by the European Communities, together with a concluding essay, perhaps more appropriate as an introductory essay, on the alternative kinds of, and alternatives to, Bills of Rights.

the concept of equality, and trade and development.

Everyone will disagree with the inclusion of some and the exclusion of other documents. For example, there seems little point in the inclusion of the European Convention on Human Rights which is surely one of the most widely-distributed legal documents in Europe, and if that seems to view too parochially the intended readership of the book why of all possible judgments of the European Court of Human Rights was that in the *Sunday Times* (childhome victims) case selected? Some reservation must also be expressed about the inclusion in what is otherwise a collection of objective documents of the dissenting judgment of Judge Tanaka in the South West Africa cases.

This second edition is organized in a very similar way to the first, but the original part one concerned with national human rights documents has been dropped. The 1979 Convention on the Elimination of All Forms of Discrimination Against Women replaces the 1967 Declaration of the same name, and five other documents have been added. Such a collection retains its basic usefulness as a handy compilation of texts which are widely and inconveniently scattered even when full library resources are available, but in view of the limited alterations made it must be asked whether a reprint of the first edition at half the price would not have been equally satisfactory to the likely buyers.

Wilson Finnie

Wilson Finnie is lecturer in constitutional law at the University of Edinburgh.

JUST PUBLISHED

Family Law

P.J. PACE

This HANDBOOK covers all the significant developments in this area of the law that have occurred recently, taking into account the provisions of the Domestic Proceedings and Magistrates' Courts Act 1978 and the Magistrates' Courts Act 1980. The text will act as a succinct and simplified introduction to the substantive part of most Family Law courses, whether professional or degree, but also assesses and evaluates the law in its present form and proposals for its reform.

308 pages

Illustrated

£4.95

JUST PUBLISHED

Consumer Credit

R.C. LAWSON

176 pages £3.76

JUST PUBLISHED

Cases in Income Tax Law

HEIRBY TOCH

276 pages £4.50

JUST PUBLISHED

Company Law 8th edition

M.C. OLIVER

416 pages £3.95

IN PREPARATION: JULY

Bankruptcy Law 8th edition

P.W.D. HILTON revised by L.M. MCGILL

176 pages approx. Approx. £3.95

IN PREPARATION: JULY

Law of Succession 2nd edition

L.B. CHILTON

272 pages approx. Approx. £4.50

IN PREPARATION: JULY

Commercial and Industrial Law 2nd edition

ANNIE H. RUBY

288 pages approx. Approx. £4.95

IN PREPARATION: SEPTEMBER

Landlord and Tenant

J.M. GALE

224 pages approx. Approx. £3.75



Teachers and lecturers may send for inspection Copies of any of the above titles.

Write for the FREE M&E Handbook list and/or Legal Studies catalogue to Macdonald & Evans Ltd., FREEPOST, Plymouth PL5 2BR (no postage stamp needed if posted in the UK).

Law Books from Pitman

The Sale of Goods

P.S. Atiyah, Professor of English Law,

University of Oxford

The sixth edition of this well-established

text has been fully up-dated. It incorporates

the Unfair Contract Terms Act 1977 and the

consolidating version of the Sale of Goods

Act 1979 as well as covering a number of

further proposals for reform currently under

discussion.

1980/ISBN 0 273 01612 1/Cased/£15.95

1981/ISBN 0 273 01648 6/Paper/£8.95

Company Law

Kenneth Smith, Late Barrister-at-Law and

Denis Keenan, Barrister-at-Law, both

formerly of Chelmer Institute of Higher

Education

Now in its fourth edition, this popular text

now includes the Companies Act 1980 as

well as the main provisions of the

Companies Act 1981. Ideal for students of

Business Studies and Law taking

professional examinations

1981/ISBN 0 273 01680 6/Paper/£6.95

Write now for inspection copies

and our latest catalogue.

Pitman Books Limited, 39 Parker Street, London WC2B 5PB

Pitman Books

Next weeks issue of the

THES

will be reviewing new books on
Social Administration

Volume III
THE POLITICAL BACKGROUND OF THE
FEDERAL CONVENTION

Politics and the Constitution

in the
History of the United States

WILLIAM WINSLOW CROSSKEY &
WILLIAM JEFFREY, JR

This work is a comprehensive reassessment of the meaning of the Constitution, based on examination of 18th century usages of key political and legal concepts and terms. Crosskey's basic thesis was that the Founding Fathers truly intended a government with plenary, nationwide powers, and not, as in the received views, a limited federalism.

Volume III, published March 1981, £16.20
3-volume boxed set, £60.00

THE UNIVERSITY OF CHICAGO PRESS
126 Buckingham Palace Road, London SW1W 9SD

BARBICAN BUSINESS BOOK CENTRE

Specialist Booksellers and Library Suppliers
to Institutes of
Learning and Higher Education

Large selection of Economics books always
available from stock

ECONOMICS · BUSINESS STUDIES · LAW
ACCOUNTING AND FINANCIAL MANAGEMENT
TAXATION · MARKETING · STATISTICS · BANKING
AND INVESTMENT · SHIPPING · REFERENCE

Personal custom welcome. Orders also taken by post or telephone
BARBICAN BUSINESS BOOK CENTRE
9 MOOREFIELDS, LONDON EC2V 9AE
Tel: 01-628 7479, Mondays to Fridays, 9 am to 5.30 pm

A CAREER IN LAW

BRIAN HOGAN,

LL.B., of Gray's Inn, Barrister

Professor of Common Law and Head of Department of Law, University of Leeds

Topics covered include:

- * Legal education - part time or full time, university or polytechnic? Are there alternative routes? What does it cost?
- * The vocational stage - is it worth going on?
- * Barristers - what do they do? Courses and examinations, careers and opportunities - what are my chances of promotion to the Bench?
- * Solicitors - what do they do? Courses and examinations, careers and opportunities - how do I start my own practice?
- * Women in the law - do they face any special difficulties?
- * Legal executives and barristers' clerks - training and opportunities what do they do?
- * Non-professional and non-law options - would a law degree help me to become Chief Constable?

July 1981 Paperback: £1.95 0 421 28050 8

Sweet & Maxwell

T.H.E.S.
Special Book Number
for Autumn

- | | |
|--------------|-----------------------|
| September 18 | - Economics |
| September 25 | - History |
| October 2 | - University Presses |
| October 9 | - Biological Sciences |
| October 16 | - Education |
| October 23 | - English |
| October 30 | - Sociology |

Universities continued

The Chinese University of Hong Kong
FACULTY OF MEDICINE
FOUNDED CHAIR OF
CHEMICAL PATHOLOGY
(Readvertised)

Timable at this new medical school which will open in the fall term of 1981 with an enrolment of 100 students. Applicants should possess a medical qualification registered with the General Medical Council of Great Britain, and Higher Academic and professional qualifications, with experience in research and teaching and research.

Details of assumptions of Duty: Applicants are expected to assume duty by January 1982 or as soon as possible thereafter to participate in planning the curriculum and supervising the instruction of postgraduate students. Teaching will be commencing in the fall term of 1982.

Conditions of Service: The maximum salary for a Chair appointment will be HK\$300,000 per annum (Exchange rate 1:1 = HK\$100,000). Terms of service include: leave, pension, superannuation, gratuity, etc.

Salary scale: Senior Lecturer HK\$150,000, Lecturer HK\$120,000, Assistant Lecturer HK\$90,000, and Junior Lecturer HK\$70,000.

Further details and application forms may be obtained from the Faculty of Medicine, Chinese University of Hong Kong, Shatin, N.T., Hong Kong not later than June 25, 1981. Full particulars of the vacant Chair and Lectures on the Faculty of the University are available on request.

Southampton University
Department of Civil Engineering
Lectureship in
Geotechnical Engineering

Under the 5th C. Special Appointment Scheme the Department of Civil Engineering has been awarded an established lectureship in Geotechnical Engineering.

The young lecturer appointed will be expected to develop the geotechnical programme in the Department, particularly in the areas of Soil Mechanics and Foundation Engineering, and to undertake teaching and research in these areas.

Salary scale: £6070-£12,860 per annum. The initial salary will be determined by qualifications and experience.

Further particulars may be obtained from D.A.S. Clapton, The University, Southampton, SO9 5NH, to whom applications should be sent by 20 June 1981.

LATROBE UNIVERSITY
Melbourne, Australia
SCHOOL OF BIOLOGICAL SCIENCE
DEPARTMENT OF GENETICS
AND HUMAN VARIATION
LECTURER IN GENETICS
(FIXED TERM)

A position is available for a lecturer with research experience in cytogenetics and human variation. The position is for a fixed term of five years. The salary scale is £12,425-£22,125.

Further information and application forms are available from the Association of Commonwealth Universities, 10, Bedford Square, London WC1R 4EJ.

COLCHESTER UNIVERSITY OF HIGHER STUDENTS' UNION
PERMANENT SECRETARY

In addition to managerial responsibilities, the Permanent Secretary will be responsible for the day-to-day running of the Union. The position is for a fixed term of five years. The salary scale is £8,000-£12,000.

UNIVERSITY OF THE WEST INDIES
JAMAICA
Applications are invited for the post of
SENIOR RESEARCH FELLOW/RESEARCH LECTURER IN THE SEISMIC RESEARCH UNIT

Applicants should hold qualifications in Geophysics, Geology, or a related field. The position is for a fixed term of five years. The salary scale is \$12,000-£18,000.

UNIVERSITY OF THE SOUTH PACIFIC
SENIOR LECTURER/LECTURER IN AGRICULTURAL ECONOMICS

With specialism in the area of Agricultural Economics or the Economics of Agriculture as an industry. Candidates should hold a Master's degree or higher qualification in Agricultural Economics, and have had several years experience in teaching and research in this area.

UNIVERSITY OF MELBOURNE
LECTURER (LIMITED TENURE) IN THE DEPARTMENT OF ECONOMIC HISTORY

Applications are invited for the position of Lecturer in Economic History (Limited Tenure). The position is for a fixed term of five years. The salary scale is £12,425-£22,125.

HULL UNIVERSITY
LECTURES IN GERMAN

Applications are invited for the post of Lecturer in German. The position is for a fixed term of five years. The salary scale is £12,425-£22,125.

UNIVERSITY OF THE WEST INDIES
TRINIDAD
Applications are invited for the post of
SENIOR RESEARCH FELLOW/RESEARCH LECTURER IN THE SEISMIC RESEARCH UNIT

Applicants should hold qualifications in Geophysics, Geology, or a related field. The position is for a fixed term of five years. The salary scale is \$12,000-£18,000.

UNIVERSITY OF THE SOUTH PACIFIC
SENIOR LECTURER/LECTURER IN AGRICULTURAL ECONOMICS

With specialism in the area of Agricultural Economics or the Economics of Agriculture as an industry. Candidates should hold a Master's degree or higher qualification in Agricultural Economics, and have had several years experience in teaching and research in this area.

UNIVERSITY OF MELBOURNE
LECTURER (LIMITED TENURE) IN THE DEPARTMENT OF ECONOMIC HISTORY

Applications are invited for the position of Lecturer in Economic History (Limited Tenure). The position is for a fixed term of five years. The salary scale is £12,425-£22,125.

HULL UNIVERSITY
LECTURES IN GERMAN

Applications are invited for the post of Lecturer in German. The position is for a fixed term of five years. The salary scale is £12,425-£22,125.

Loughborough University of Technology
Lecturer in Physical Education

Applications are invited from graduates with suitable experience in Physical Education for the post of Lecturer in Physical Education and Sports Science. The duties will include undergraduate teaching and supervision of postgraduate studies and research. Specialist knowledge in biomechanics would be an advantage.

BEDFORD COLLEGE FOR TEACHERS
ASSISTANT DIRECTOR

Applications are invited for the post of Assistant Director in the recently established Centre for Teacher Education. The position is for a fixed term of five years. The salary scale is £12,425-£22,125.

DUNDEE UNIVERSITY
DEPARTMENT OF PHARMACY AND THERAPEUTICS
LECTURERSHIP IN PHARMACOLOGY

Applications are invited for the position of Lecturer in Pharmacology. The position is for a fixed term of five years. The salary scale is £12,425-£22,125.

NATIONAL UNIVERSITY OF IRELAND
LECTURER IN PHYSICS

Applications are invited for the post of Lecturer in Physics. The position is for a fixed term of five years. The salary scale is £12,425-£22,125.

THE UNIVERSITY OF OTAGO
DEPARTMENT OF HISTORY
Applications are invited for a
Lecturer in Medieval History

Appointments are invited for the post of Lecturer in Medieval History. The position is for a fixed term of five years. The salary scale is \$12,000-£18,000.

THE UNIVERSITY OF OTAGO
DEPARTMENT OF HISTORY
Applications are invited for a
Lecturer in Medieval History

Appointments are invited for the post of Lecturer in Medieval History. The position is for a fixed term of five years. The salary scale is \$12,000-£18,000.

THE UNIVERSITY OF OTAGO
DEPARTMENT OF HISTORY
Applications are invited for a
Lecturer in Medieval History

Appointments are invited for the post of Lecturer in Medieval History. The position is for a fixed term of five years. The salary scale is \$12,000-£18,000.

THE UNIVERSITY OF OTAGO
DEPARTMENT OF HISTORY
Applications are invited for a
Lecturer in Medieval History

Appointments are invited for the post of Lecturer in Medieval History. The position is for a fixed term of five years. The salary scale is \$12,000-£18,000.

THE UNIVERSITY OF OTAGO
DEPARTMENT OF HISTORY
Applications are invited for a
Lecturer in Medieval History

Appointments are invited for the post of Lecturer in Medieval History. The position is for a fixed term of five years. The salary scale is \$12,000-£18,000.

THE UNIVERSITY OF OTAGO
DEPARTMENT OF HISTORY
Applications are invited for a
Lecturer in Medieval History

Appointments are invited for the post of Lecturer in Medieval History. The position is for a fixed term of five years. The salary scale is \$12,000-£18,000.

THE UNIVERSITY OF OTAGO
DEPARTMENT OF HISTORY
Applications are invited for a
Lecturer in Medieval History

Appointments are invited for the post of Lecturer in Medieval History. The position is for a fixed term of five years. The salary scale is \$12,000-£18,000.

THE UNIVERSITY OF OTAGO
DEPARTMENT OF HISTORY
Applications are invited for a
Lecturer in Medieval History

Appointments are invited for the post of Lecturer in Medieval History. The position is for a fixed term of five years. The salary scale is \$12,000-£18,000.

THE UNIVERSITY OF OTAGO
DEPARTMENT OF HISTORY
Applications are invited for a
Lecturer in Medieval History

Appointments are invited for the post of Lecturer in Medieval History. The position is for a fixed term of five years. The salary scale is \$12,000-£18,000.

THE UNIVERSITY OF OTAGO
DEPARTMENT OF HISTORY
Applications are invited for a
Lecturer in Medieval History

Appointments are invited for the post of Lecturer in Medieval History. The position is for a fixed term of five years. The salary scale is \$12,000-£18,000.

THE UNIVERSITY OF OTAGO
DEPARTMENT OF HISTORY
Applications are invited for a
Lecturer in Medieval History

Appointments are invited for the post of Lecturer in Medieval History. The position is for a fixed term of five years. The salary scale is \$12,000-£18,000.

THE UNIVERSITY OF OTAGO
DEPARTMENT OF HISTORY
Applications are invited for a
Lecturer in Medieval History

Appointments are invited for the post of Lecturer in Medieval History. The position is for a fixed term of five years. The salary scale is \$12,000-£18,000.

THE UNIVERSITY OF OTAGO
DEPARTMENT OF HISTORY
Applications are invited for a
Lecturer in Medieval History

Appointments are invited for the post of Lecturer in Medieval History. The position is for a fixed term of five years. The salary scale is \$12,000-£18,000.

THE UNIVERSITY OF OTAGO
DEPARTMENT OF HISTORY
Applications are invited for a
Lecturer in Medieval History

Appointments are invited for the post of Lecturer in Medieval History. The position is for a fixed term of five years. The salary scale is \$12,000-£18,000.

THE UNIVERSITY OF OTAGO
DEPARTMENT OF HISTORY
Applications are invited for a
Lecturer in Medieval History

Appointments are invited for the post of Lecturer in Medieval History. The position is for a fixed term of five years. The salary scale is \$12,000-£18,000.

THE UNIVERSITY OF OTAGO
DEPARTMENT OF HISTORY
Applications are invited for a
Lecturer in Medieval History

Appointments are invited for the post of Lecturer in Medieval History. The position is for a fixed term of five years. The salary scale is \$12,000-£18,000.

THE UNIVERSITY OF OTAGO
DEPARTMENT OF HISTORY
Applications are invited for a
Lecturer in Medieval History

Appointments are invited for the post of Lecturer in Medieval History. The position is for a fixed term of five years. The salary scale is \$12,000-£18,000.

THE UNIVERSITY OF OTAGO
DEPARTMENT OF HISTORY
Applications are invited for a
Lecturer in Medieval History

Appointments are invited for the post of Lecturer in Medieval History. The position is for a fixed term of five years. The salary scale is \$12,000-£18,000.

THE UNIVERSITY OF OTAGO
DEPARTMENT OF HISTORY
Applications are invited for a
Lecturer in Medieval History

Appointments are invited for the post of Lecturer in Medieval History. The position is for a fixed term of five years. The salary scale is \$12,000-£18,000.

THE UNIVERSITY OF OTAGO
DEPARTMENT OF HISTORY
Applications are invited for a
Lecturer in Medieval History

Appointments are invited for the post of Lecturer in Medieval History. The position is for a fixed term of five years. The salary scale is \$12,000-£18,000.

THE UNIVERSITY OF OTAGO
DEPARTMENT OF HISTORY
Applications are invited for a
Lecturer in Medieval History

Appointments are invited for the post of Lecturer in Medieval History. The position is for a fixed term of five years. The salary scale is \$12,000-£18,000.

THE UNIVERSITY OF OTAGO
DEPARTMENT OF HISTORY
Applications are invited for a
Lecturer in Medieval History

Appointments are invited for the post of Lecturer in Medieval History. The position is for a fixed term of five years. The salary scale is \$12,000-£18,000.

THE UNIVERSITY OF OTAGO
DEPARTMENT OF HISTORY
Applications are invited for a
Lecturer in Medieval History

Appointments are invited for the post of Lecturer in Medieval History. The position is for a fixed term of five years. The salary scale is \$12,000-£18,000.

THE UNIVERSITY OF OTAGO
DEPARTMENT OF HISTORY
Applications are invited for a
Lecturer in Medieval History

Appointments are invited for the post of Lecturer in Medieval History. The position is for a fixed term of five years. The salary scale is \$12,000-£18,000.

THE UNIVERSITY OF OTAGO
DEPARTMENT OF HISTORY
Applications are invited for a
Lecturer in Medieval History

Appointments are invited for the post of Lecturer in Medieval History. The position is for a fixed term of five years. The salary scale is \$12,000-£18,000.

THE UNIVERSITY OF OTAGO
DEPARTMENT OF HISTORY
Applications are invited for a
Lecturer in Medieval History

Appointments are invited for the post of Lecturer in Medieval History. The position is for a fixed term of five years. The salary scale is \$12,000-£18,000.

THE UNIVERSITY OF OTAGO
DEPARTMENT OF HISTORY
Applications are invited for a
Lecturer in Medieval History

Appointments are invited for the post of Lecturer in Medieval History. The position is for a fixed term of five years. The salary scale is \$12,000-£18,000.

THE UNIVERSITY OF OTAGO
DEPARTMENT OF HISTORY
Applications are invited for a
Lecturer in Medieval History

Appointments are invited for the post of Lecturer in Medieval History. The position is for a fixed term of five years. The salary scale is \$12,000-£18,000.

THE UNIVERSITY OF OTAGO
DEPARTMENT OF HISTORY
Applications are invited for a
Lecturer in Medieval History

Appointments are invited for the post of Lecturer in Medieval History. The position is for a fixed term of five years. The salary scale is \$12,000-£18,000.

THE UNIVERSITY OF OTAGO
DEPARTMENT OF HISTORY
Applications are invited for a
Lecturer in Medieval History

Appointments are invited for the post of Lecturer in Medieval History. The position is for a fixed term of five years. The salary scale is \$12,000-£18,000.

THE UNIVERSITY OF OTAGO
DEPARTMENT OF HISTORY
Applications are invited for a
Lecturer in Medieval History

Appointments are invited for the post of Lecturer in Medieval History. The position is for a fixed term of five years. The salary scale is \$12,000-£18,000.

THE UNIVERSITY OF OTAGO
DEPARTMENT OF HISTORY
Applications are invited for a
Lecturer in Medieval History

Appointments are invited for the post of Lecturer in Medieval History. The position is for a fixed term of five years. The salary scale is \$12,000-£18,000.

THE UNIVERSITY OF OTAGO
DEPARTMENT OF HISTORY
Applications are invited for a
Lecturer in Medieval History

Appointments are invited for the post of Lecturer in Medieval History. The position is for a fixed term of five years. The salary scale is \$12,000-£18,000.

THE UNIVERSITY OF OTAGO
DEPARTMENT OF HISTORY
Applications are invited for a
Lecturer in Medieval History

Appointments are invited for the post of Lecturer in Medieval History. The position is for a fixed term of five years. The salary scale is \$12,000-£18,000.

THE UNIVERSITY OF OTAGO
DEPARTMENT OF HISTORY
Applications are invited for a
Lecturer in Medieval History

Appointments are invited for the post of Lecturer in Medieval History. The position is for a fixed term of five years. The salary scale is \$12,000-£18,000.

THE UNIVERSITY OF OTAGO
DEPARTMENT OF HISTORY
Applications are invited for a
Lecturer in Medieval History

Appointments are invited for the post of Lecturer in Medieval History. The position is for a fixed term of five years. The salary scale is \$12,000-£18,000.

THE UNIVERSITY OF OTAGO
DEPARTMENT OF HISTORY
Applications are invited for a
Lecturer in Medieval History

Appointments are invited for the post of Lecturer in Medieval History. The position is for a fixed term of five years. The salary scale is \$12,000-£18,000.

THE UNIVERSITY OF OTAGO
DEPARTMENT OF HISTORY
Applications are invited for a
Lecturer in Medieval History

Appointments are invited for the post of Lecturer in Medieval History. The position is for a fixed term of five years. The salary scale is \$12,000-£18,000.

THE UNIVERSITY OF OTAGO
DEPARTMENT OF HISTORY
Applications are invited for a
Lecturer in Medieval History

Appointments are invited for the post of Lecturer in Medieval History. The position is for a fixed term of five years. The salary scale is \$12,000-£18,000.

THE UNIVERSITY OF OTAGO
DEPARTMENT OF HISTORY
Applications are invited for a
Lecturer in Medieval History

Appointments are invited for the post of Lecturer in Medieval History. The position is for a fixed term of five years. The salary scale is \$12,000-£18,000.

Overseas continued

UNIVERSITY OF RIYADH

College of Medicine

SAUDI ARABIA

Applications are invited from suitable qualified (men and women) to fill the following posts as Professors, Associate Professors and Assistant Professors in preclinical and clinical subjects as indicated below for the academic year 1981-82. Applicants should have Ph.D., M.R.C.P., F.R.C.S., M.R.C.O.G., M.R.C.Path., American Board and Canadian Fellowship and teaching experience at University level:

Anatomy:	Associate Professors
Physiology:	Assistant Professors
Biochemistry:	Professor, Associate Professors, Assistant Professors (Medically qualified besides a degree in Biochemistry)
Pharmacology:	Associate Professors, Assistant Professors
Pathology:	Associate Professors
Community Medicine:	Professor, Associate Professors, Assistant Professors
Ophthalmology:	Professor, Assistant Professor
Microbiology:	Associate Professors, Assistant Professors
E.N.T.:	Professor, Associate Professors, Assistant Professors
General Surgery:	Associate Professors, Assistant Professors
Orthopaedic Surgeon:	Associate Professor
Urologist:	Associate Professor, Assistant Professor
Haematology:	Associate Professor, Assistant Professors
Neurology:	Associate Professor, Assistant Professors
Cardiology:	Associate Professor
Tropical Med.:	Associate Professor
Endocrinology:	Associate Professor
Pediatrics:	Assistant Professors
Obstet. & Gyna.:	Associate Professor

Salary Scales:	Start of the Scale (Monthly)	Annual Increment (Monthly)	End of the Scale (Monthly)	Transport Allowance (Monthly)
Assistant Professor:	8970	450	11220	550
Associate Professor:	11410	500	13910	600
Professor:	13190	550	16940	600

Clinical Allowance: For those engaged in clinical care of patients in hospital there is an allowance at 80% of the basic salary. For medically qualified staff not engaged in clinical care of patients there is a professional allowance of 30% of the basic salary.

Appointments are normally for one year and renewable. Medium of instruction is English. Furnished accommodation is going to be provided. Terminal gratuity and annual leave 60 days, air tickets for the employee and up to 3 dependents are paid annually. There is no income tax in Saudi Arabia and money is freely convertible and transferable.

Salary scales are in Saudi Riyals (\$R 3.36 = \$1 U.S. approx.). (\$R 7.32 = one sterling pound approx.).

Application with a comprehensive Curriculum Vitae and addresses of two referees to be sent to: Dr. Hassan Kamel, MRCP, Dean, College of Medicine, P.O. Box 2925, Riyadh, Saudi Arabia, and, at the same time three copies of application and Curriculum Vitae with names of referees to be sent to:

FOR UK AND OTHERS:

Dr. A. T. G. Johnston
c/o Saudi Educational Office
29 Balgair Square
London SW1X 8QB
England
Phone: 01-236 7221

FOR STATES:

Mrs. Jerry Dohan
c/o Saudi Educational Mission
2425 West Loop South
Suite 100
Houston, Texas 77027
Phone: 713-629-5170

FOR CANADA:

Mr. Essam Shalkh
Saudi Education Mission
Suite 1144 - 99 Bank Street
Ottawa K1P 8B8
Ontario K1P 8B8
Phone: 613-237-3550

Interviews are going to be held during the second week of August 1981 for applicants in States and Canada.

THES12

Establish a fresh teaching career in South Africa....

Barlow's Tractor Division, distributors of caterpillar equipment sponsor colleges of higher education throughout Southern Africa, and we now have a number of opportunities for experienced Teachers to join our education programme. If you are qualified to teach *Maths* and *Science* subjects to at least 'A' level standard as well as the final City and Guilds Technicians course in the following subjects: *Maths, Hydraulics, Mechanics, Thermodynamics, Strength of Materials, Industrial Management and Electro-technology*, then you could join us as a *Lecturer*.

You should be a graduate with a recognised teaching qualification and a

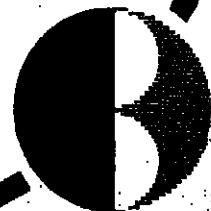
sound track record of teaching experience within your discipline.

We offer very competitive salaries and a full range of benefits including fully paid passage to South Africa for you and your family; settling-in allowance; assistance with removal expenses, accommodation and excellent pension and leave arrangements.

So, if you feel ready to respond to the challenge of teaching in a new country write, stating full details of qualifications, experience, age and marital status to Recruitment Consultant, Barlow Rand Limited, 16 Stratford Place, London W1N 9AF.

Barlow's Tractor Division

An equal opportunity employer



Member of the Barlow Rand Group

UNIVERSITY OF CAPE TOWN

SENIOR LECTURER IN CHEMICAL ENGINEERING

Appointment to the above post, will be made according to qualifications and experience on the salary scale R14 270 a year - R20 850 per annum. An appointee who satisfies the requirements for membership of the South African Institution of Chemical Engineers may be eligible for a subvention of R4 500 per annum, additional to the above salary scale.

The person appointed will be expected to participate in the teaching and research activities of the Department. Excellent support exists for research and for contact with industry. Current research activities include fermentation, catalysis, flotation, ion-exchange and wastewater treatment.

Staff benefits include 75% rebate on tuition fees for dependants at UCT, generous study leave privileges, housing subsidy subject to certain conditions, a salary, pension fund, medical aid and group life insurance schemes.

Appointees should submit a curriculum vitae, stating age, present salary, relevant professional or teaching experience and give the names and addresses of three referees. Further information should be obtained from the Registrar, (Attention: Appointments Office), University of Cape Town, Rondebosch, 7700, South Africa, by whom applications may be received not later than 26th June 1981.

The University's policy is not to discriminate in the appointment of staff on the grounds of sex, race or religion. Further information on the implementation of this policy is obtainable from the Registrar.

THES12

UNITED STATES MEDICAL COLLEGE OF GEORGIA, AUGUSTA

Resent Biochemistry/Physiology Research Associate

Applications are invited from Ph.D. holders in biochemistry, physiology, or related fields to join an established research group studying problems of long-term survival preservation of kidneys for surgical transplantation. The objective of this study is to determine the problems of cryopreservation and to develop techniques for in vivo and in vitro renal evaluation. (Lab. 25M, 55M) are made of kidneys.

The appointment is for two years and may be renewed. Starting salary \$15,000. Starting date can be immediate.

Applications will consist of a curriculum vitae, list of publications, and addresses of three referees. The curriculum vitae should be sent to: Dr. J. H. P. Jones, Professor of Biochemistry, Department of Biochemistry, University of Georgia, Athens, Georgia 30602.

THES12

Forthcoming Special Book Numbers in The Times Higher Education Supplement

June 5
Social Admin

Oct 2
University Presses (11)

Oct 9
Biological Sciences (11)

Oct 16
Education (11)

Oct 23
English (11)

Oct 30
Sociology (11)

Special Feature

June 12
Computers in
Higher Education

Overseas continued



THE NEW SOUTH WALES INSTITUTE OF TECHNOLOGY — SYDNEY AUSTRALIA

The New South Wales Institute of Technology is established to provide a wide range of courses for those entering or already employed in industry, commerce and government and to undertake applied research. The teaching and research activities of The Institute are carried on in seven Faculties with a total enrolment of some 8,700 students studying in more than 20 major undergraduate programmes and a number of graduate courses.

The Institute invites applications for the following Senior Academic appointments.

FACULTY OF ARCHITECTURE AND BUILDING

HEAD OF SCHOOL OF BUILDING STUDIES

Applications are invited for the position of Head of School of Building Studies, newly established as a separate School in the Faculty of Architecture and Building. The School will be responsible for teaching the Building and Building Surveying Degree courses as well as graduate work in these and related areas, with a total enrolment of over 100 students. Applicants should be suitably distinguished academically in building, and experience in both industry and tertiary education, would be an advantage. Since the Associate Head of School is a quantity surveyor, candidates should preferably not offer this discipline as their primary area of interest.

All the courses of the School are offered on the basis of day release or operative education, and applicants should therefore be able to demonstrate a commitment to co-operative education and some record of support and support with the various facets of the building industry.

(In applying, please quote reference no. 110.)

FACULTY OF ENGINEERING

SCHOOL OF ELECTRICAL ENGINEERING

ASSOCIATE HEAD

The School of Electrical Engineering offers a six year Bachelor Degree course with a substantial integrated industrial experience component, and a Masters Degree by Thesis, and participates in programmes leading to the Graduate Diploma in Engineering. Total student enrolment is about 700. There is vigorous activity in applied research and development and in continuing education for practising engineers, and the School maintains extensive contacts with industry.

The appointee will exercise substantial academic and administrative leadership in all aspects of the school's operations, and will be expected to take charge of the School while the present Head of School is Dean of the Faculty. The Associate Head of School may also be called upon from time to time to assume the duties of Dean of the Faculty.

A candidate in electrical engineering is essential, and extensive professional experience as an engineer would be essential, together with experience in an administrative role, or as a teacher at tertiary level. A background in communications, digital systems, control, or electronics would be preferred, but interest in any branch of electrical engineering will be considered.

(In applying, please quote reference no. 111.)

SCHOOL OF MECHANICAL ENGINEERING

PRINCIPAL LECTURER

The School offers six-year Bachelor Degree courses in Mechanical and Production Engineering with a substantial integrated industrial experience component, and Masters Degree programmes by Coursework and Report and by Thesis. It also participates in programmes leading to the Graduate Diploma in Engineering. Total student enrolment approaches 700. There is vigorous activity in applied research and development and in continuing education for practising engineers, and the School maintains extensive contacts with industry.

The School is seeking a Principal Lecturer with professional interests in either production engineering, engineering management, control engineering, applied mechanics, or a combination of these fields.

The appointee will be expected to exercise academic leadership in relation to the teaching and further development of subjects in both undergraduate and postgraduate courses and also in the promotion of applied research and development. The appointee will also be expected to take significant responsibility in the internal administration of the School and may be required to act as Deputy Head of School.

Applicants must possess a doctorate or equivalent qualification, and should have substantial professional experience in industry and in higher education.

(In applying, please quote reference no. 112.)

FURTHER INFORMATION AND METHOD OF APPLICATION

Salaries for these positions are as follows:

Head of School:	\$A37,322 to \$A40,067
Associate Head of School:	\$A33,331 (Level 3), \$A32,350 (Level 2), \$A31,369 (Level 1)
Principal Lecturer:	\$A33,331 (Level 3), \$A32,350 (Level 2), \$A31,369 (Level 1)

Appointments to these positions will normally be with tenure i.e. continuous employment until the age of retirement. Appointments with tenure are subject to a medical examination and usually carry with them an obligation to contribute to superannuation. Alternatively the opportunity exists to be appointed by way of a three (3) year fixed term contract.

Overseas appointees will be expected to enter into a service agreement to remain with the Institute for a minimum of three (3) years.

Fares and a contribution towards removal expenses are provided for overseas appointees. A Housing Loan Scheme is also available. With consent of Council, academic staff are permitted to undertake limited consulting work.

WORK/LIFESTYLE EXCHANGE IN AUSTRALIA

- I am a registered psychologist with postgraduate qualification in education and am seeking a position of Educational Psychology in the United Kingdom.

- I lecture in education psychology at a college of advanced education and have a part-time private practice in psychology.

- I would like to exchange job, income, car etc with someone who has a part-time setup for 6 to 12 months.

- If you are interested, write to me: Chris Hamilton, c/o Department of Educational Psychology, Marley College of Advanced Education, MAULE STREET, SYDNEY, AUSTRALIA 2057.

FACULTY OF SCIENCE

SCHOOL OF CHEMICAL & EARTH SCIENCES

ASSOCIATE HEAD

The School of Chemical & Earth Sciences consists of the Department of Chemistry and Geology. It offers courses in these areas leading to the degree of Bachelor of Applied Science, the Master of Applied Science obtained by research, and there is also offered a selection of courses at graduate level which relate to the needs of the community and modern industry as a feature of the work of the School.

The Associate Head will be required to provide academic and administrative leadership to the School and may be asked to assume from time to time the responsibilities of the Head of the School. The Head of the School is an incoming, charter and a staff member.

The successful applicant will have a doctoral degree in a complementary area of chemistry, with demonstrated administrative and leadership abilities, and have experience in tertiary teaching and a demonstrable interest in research and management experience would be an advantage.

(In applying, please quote reference no. 113.)

FACULTY OF MATHEMATICAL & COMPUTING SCIENCES

SCHOOL OF MATHEMATICAL SCIENCES

ASSOCIATE HEAD

The School of Mathematical Sciences offers three main courses: a degree course in mathematics leading to the Bachelor of Applied Science, a Graduate Diploma course in Operations Research and a Masters Degree in Operations Research in course work. The School also offers the degree of Master of Applied Science, awarded on the basis of research work and thesis. Current interests in the School include more problems in physics, economics, modelling, wave propagation in subaqueous media, quantum theory, statistical methods in environmental noise control and in medical applications, mathematical education research.

Applicants are invited from persons with high academic qualifications and experience in applicable mathematics for appointment to the position of Associate Head of School. The successful applicant will have demonstrated administrative and leadership abilities, and have experience in tertiary teaching and a demonstrable interest in education, industry and managerial experience would be a distinct advantage. The Associate Head will be required to provide academic and administrative leadership in the field of interest within the School, be responsible for the School's large variety of arrangements and have within the Head of School, in the further development of the School. Experience in practical applications involving the use of computers would be an advantage.

(In applying, please quote reference no. 114.)

SCHOOL OF COMPUTING SCIENCES

PRINCIPAL LECTURER

The School offers a Bachelor's degree in Computing Science, a post-graduate diploma in Data Processing, and a Master's Degree by Research and Thesis. It is planned to introduce a Master's Degree in Information Science by course work in 1982.

The School has a number of laboratories and a MIB PHASE 750 Computer. The Computer Centre is currently providing with the installation of a large Honeywell network which will be based on duplicated level 6000 systems and some 200 terminals. The School is active in research and consulting to industry.

The current academic establishment is 10 in four units: Computing Systems, Information Systems, Computing Methods and Business Computing. Computing Systems includes systems architecture, operating system, languages at a post-graduate level, performance evaluation, and microprocessors. Computing Methods concentrates on two areas, the teaching of programming techniques and an advanced application such as artificial intelligence, computer graphics and theoretical computer science.

The successful applicant would be appointed in the area of Computing Methods, or Computing Systems to provide academic leadership in research and to coordinate the teaching responsibilities of the Unit.

Applicants will have a doctoral degree and be able to demonstrate leadership in one of the above fields. The person will have a major role in the planning of this rapidly developing School and will be given specific responsibility for certain aspects of its administration.

(In applying, please quote reference no. 115.)

Applications close on 26th July, 1981. Written applications should include: Address, phone number, personal particulars, evidence of qualifications, publication record, work undertaken, nature of interaction with business organisations, and the names and addresses of three referees from whom confidential reports may be obtained. Applications are to be sent to:-

The Official Secretary,
N.S.W. Government Offices,
66 Strand,
London WC2N 5LZ.

Printed information on these positions, and on conditions of employment generally, is available on request from the above address.

THES12

Polytechnics

THE POLYTECHNIC — HUDDERSFIELD

Department of Mechanical and Production Engineering
(Ref: ACA 426/433)

SENIOR LECTURER/LECTURER II

Applications are invited for two Lecturer II/Senior Lecturer Posts in Mechanical and Production Engineering. Specialisation in one or more of the following subjects would be an advantage.

Applied Mechanics, Manufacturing Technology, Engineering Design, Materials Technology. The successful applicant will be required to make a major contribution to the unique degree courses with its emphasis on Engineering Design, Higher National Diploma and TEC Higher Certificate and Certificate work is actively encouraged.

The applicants should therefore have a good honours degree in Mechanical or Production Engineering and have industrial/academic consultancy experience. Whilst additional teaching experience would be an advantage the industry based engineer should feel encouraged to apply. Salary: SL: £15,824-£17,280 (SL2: £12,141-£13,582-£15,023).

Further details and application forms are available from the Personnel Office, The Polytechnic, Queensgate, Huddersfield HD1 3DH. Tel: 0484 2288 ext. 2224 and should be returned not later than Friday 26th June, 1981.

THES3

Classified Advertisements

To advertise in
The THES
phone
Lorraine Williams
on

01-837 1234
Extn 575

The Times
Higher
Education
Supplement

P.O. Box 7,
Gray's Inn Road,
London WC1X 8EZ.

Don's diary

Monday

Today is the first day of term, but most of its old significance has gone. Now it is just the start of a busy week. I am officially self-employed, and manage by dint of working extremely hard, to earn a quarter or a third of a normal salary. This is something one can only keep up for so long, but while one can, it seems the best plan.

Most of the morning is spent with scissors and paste on a book I am writing. It needs to be made sufficiently presentable to be handed to the prospective publisher for preliminary reading. It isn't finished, but I don't want to proceed unless it is going to make some money. I mark about 12 oppressively hand-corrected pages, and set to work re-typing words, phrases, inserts, even whole paragraphs. It requires an effort of dexterity to fit these tiny stickers on the page. Oh for days past, when one could hand over such chores to one's secretary, or even take them to the typing pool!

After lunch I take my wife for a routine visit to the local hospital, and while she is there I call-in at the university hoping to make a photocopy of my script. Will there be a queue? Will the machine take, say, a minute a page, thus making me hopelessly late for my return to the hospital?

In luck: no queue. I'm agreeably surprised by Xerox technology - it ingests by hook at the rate of about one page per 10 seconds.

Back home I set about making up a copy from the sheets. An old file serves as cover: glue, card and a heavy stapler complete the job.

Tuesday

Up at 7.30 and away at 8.30 to take my daughter to school and my wife to her psychology course at the local adult education centre. Before leaving I receive a phone call from Joan, the local primary adviser for maths. Could we make a video-recording of the kind of work we were doing with teachers on the DES regional course we worked on last term?

Adult centre to bank; thence to the university, to talk about some lectures I am going to do with a PGCE group this term. Charles, who has asked me to do these sessions with his method group, puts me down for a two-hour session on teaching, and a two-hour session on modelling. I ask him if he will lend me a set of booklets which were produced at the northern university I am due to visit for a job interview on Friday.

I talk to people in the visual aids department about making the proposed video-recording of teachers doing modelling-type project work with young children. Yes: it is quite feasible.

After lunch I am working on a review of two books on the 16-19 age range. I discover that I am already well over the allocation of words I have been offered - though I have not yet started to read the second book. I start to read the second book and am startled by its structuralism. I ring the station to find out about trains to Kent town and northern university.

The powerful temptation to throw eggs

"I'm sorry that I didn't do more in the past. British students in my class cannot believe the amount I pay in fees. We must do something to make Government realize how bad it is."

"My I suggest that we stand outside the House of Commons and throw eggs at Margaret Thatcher and other MPs who support the policy of full-cost fees. Then they might discover how angry we are and do something"; that's what an overseas student at Liverpool Uni-

Wednesday

Up early and drive to the station with my wife. Iris, to catch the Paddington train. I arrive in Kent town at 10.30 a.m. and spent an hour walking round and drinking coffee in the shopping centre.

There are eight candidates for two jobs. Five of the candidates have doctorates: prospects not good. We are taken round the college in the morning, interviewed in the afternoon.

The interview is courteous and pleasant: but I'm not sure they really understand what I'm telling them. "Don't ring us, we'll ring you!" - or at least they will ring the lucky two.

Thursday

I read some of the booklets which relate to the following day: also three more chapters of the 16-19 book. I begin to make notes on what I want to say.

Afternoon: pick up daughter from school; shopping; writing letters including a letter for job details. No phone call from Kent.

Friday

Up before 6.00 a.m. and I arrive at Reading Station to buy a ticket for the north. I hear the train come in, and arrive at the platform just as it is pulling out. No trouble! There is another train in 10 minutes' time.

I arrive at the northern university at 12 noon and have chats with two members of the staff: very pleasant. There are six applicants for this job. Two of us are sent off to the staff club to buy ourselves a buffet lunch: I realize why the Japanese lecturer does not often visit it. I have one and a half hours to spare before the interview: so I walk down to the town, look for estate agents, but don't find any. The interview is courteous and pleasant. I think they understand more or less what I am saying: this is a step forward. I even think I might have got the job. I walk down to the main station and catch the train to London, but it breaks down and we are delayed somewhere in Bedfordshire for one and a quarter hours.

Saturday

I get the phone call from the northern university, but only to say I didn't get the job. I speculate why, but probably will never know.

Christopher Ormell

The author worked for 11 years at Reading University on a series of short-term contracts. In 1980 he left as a visiting lecturer at Monash University.

This is a cautionary tale. It is about working in a local authority. It is also a condensation of a fairly detailed record I kept of a sequence of extraordinary events which came to an end of a few weeks ago, when a police investigation into affairs at Leeds Polytechnic was wound up and the polytechnic completely vindicated.

About the middle of July 1979 rumours began to spread through Leeds that corruption of some kind was rife in the polytechnic. They were supported by reports in the local evening paper, *The Yorkshire Evening Post*, by John Thorpe, the correspondent who handles local authority meetings and issues. It was clear that the rumours emanated from the City Council. They were intensified by the fact that auditors on the staff of the city's department of finance had been sent in to investigate parts of the polytechnic. Remarks and questions from these auditors were passed around, including remarks about personal problems of senior members of the polytechnic. I demanded a meeting.

In the last week of July I had a meeting with the chief officer of the Corporation and the director of finance; I was accompanied by Gordon Wright, the deputy director of the polytechnic responsible for its financial affairs. At that meeting it was accepted that an investigation was indeed being carried out, at the request of the then leader of the city council, Councillor Sparling. It was not however possible to let us know what was being investigated. It was understood that the cause of the leader's concern was a complaint to him from inside the polytechnic. It was not possible to say from whom or in what form the complaint came, nor was it possible to say what it was about. In order to bring some conclusion to our growing alarm and bafflement, the director of finance offered to complete the investigation by the end of the week and meet us again.

The report was completed and submitted to the leader of the council, who referred it to the police. He did more. He held a press conference, which resulted in a report in *The Yorkshire Evening Post* on the front page and a headline: "Poly: Police Called In". The report announced that "police have been called in to investigate alleged irregularities over building contracts, worth hundreds of thousands of pounds, for work at Leeds Polytechnic". The director of finance informed me by telephone of the leader's action and explained that the matter was now in the hands of the police he could not after all tell me what it was about, who was involved or what was likely to happen.

We seemed to be getting involved in the nightmare scenario of a police state. At no point had I been consulted about any of the rumours or complaints or asked to throw any light upon any of the actions of polytechnic staff; it was not even explained which parts of the polytechnic or which of its staff were involved.

At this point I called in my own lawyer, at my own expense, to help me to find out what was happening. The damage to the polytechnic was already being inflamed by press reports and the local authority's response. Accompanied by police officers, members of the audit section of the authority had entered offices and taken away files: all the files of the maintenance officer since April 1977, various files from the deputy and assistant directors and one letter from my own files of 1970, setting out the duties of the maintenance officer. They had also taken files from the offices of three contractors who had done work for the polytechnic.

The situation was at least becoming clearer. The report in the evening paper and the selection of files indicated that it concerned building contracts. They could not be major ones because that was being handled by the city architect; nor could they involve hundreds of thousands of pounds because the maintenance officer handled no such contracts. Nor, after lengthy internal investigation and questioning, could we ourselves find any evidence to support the allegations.

The efforts of my lawyer (astounding as it may seem that the director of a polytechnic has to go to a private lawyer to find out what his employers are doing to his staff) resulted in a meeting in the City Hall between the chief officer of the council, the deputy director of finance, a senior auditor, the director of education, the chairman of the polytechnic's governing body and myself. It was again emphasized that nothing precise could be said; nor in any case had anything definitely criminal yet been revealed. On the other hand we could be given some broad indications of the areas of investigation. It concerned a number of contracts with a local builder and a local supplier. Although nothing corrupt had yet been established, there was a suggestion of a specific illegal action which was still being investigated. We agreed that the matter should remain confidential.

It was therefore all the more interesting to be told about that very suspicion by one of my staff the next day; confidentiality seemed to be one-sided. But what was most bizarre about the meeting was the discussion that took place about the possible suspension of members of the polytechnic staff. The chairman of the governing body and I emphasized that only he or I could suspend a member of staff of the polytechnic and that we were certainly not going to do so without any evidence of why we should or indeed even the name of the person we should suspend. We would of course suspend someone if an offence was revealed and we would certainly welcome a more detailed investigation into the whole affair.

The strange affair at Leeds



Patrick Nuttgens

clearer. The report in the evening paper and the selection of files indicated that it concerned building contracts. They could not be major ones because that was being handled by the city architect; nor could they involve hundreds of thousands of pounds because the maintenance officer handled no such contracts. Nor, after lengthy internal investigation and questioning, could we ourselves find any evidence to support the allegations.

The efforts of my lawyer (astounding as it may seem that the director of a polytechnic has to go to a private lawyer to find out what his employers are doing to his staff) resulted in a meeting in the City Hall between the chief officer of the council, the deputy director of finance, a senior auditor, the director of education, the chairman of the polytechnic's governing body and myself. It was again emphasized that nothing precise could be said; nor in any case had anything definitely criminal yet been revealed. On the other hand we could be given some broad indications of the areas of investigation. It concerned a number of contracts with a local builder and a local supplier. Although nothing corrupt had yet been established, there was a suggestion of a specific illegal action which was still being investigated. We agreed that the matter should remain confidential.

It was therefore all the more interesting to be told about that very suspicion by one of my staff the next day; confidentiality seemed to be one-sided. But what was most bizarre about the meeting was the discussion that took place about the possible suspension of members of the polytechnic staff. The chairman of the governing body and I emphasized that only he or I could suspend a member of staff of the polytechnic and that we were certainly not going to do so without any evidence of why we should or indeed even the name of the person we should suspend. We would of course suspend someone if an offence was revealed and we would certainly welcome a more detailed investigation into the whole affair.

There the matter rested, as far as official relationships were concerned, for a year and a half, until this year, April 1981, when the police reported to the city council that nothing criminal had occurred and that no action was to be taken. The council did not pass on the information to me; I had to find out for myself and have it confirmed,

which the director of finance did in a letter of notable ill grace.

The matter had not of course rested there for the polytechnic and particularly for the members of staff who had been under suspicion. The demolition of the maintenance staff was for a time almost complete. The personal agony of individuals who I knew could not possibly have engaged in anything like the crimes being investigated and talked about, was incalculable.

It is too early to draw any final conclusions from this unsavoury episode but not too early to recognize a number of issues of importance to the organization and future of the polytechnic, the good of its staff and students and its relationship with the city council.

First, what had actually happened? The allegations centred upon contracts for minor works and maintenance. By the time the police investigations were being made, we had already heightened up the procedures. What the whole episode had of course revealed was the undisguised informality of our procedures for getting maintenance and minor works carried out. We had not flouted but manipulated the rules of government of the polytechnic, so as to carry out the work with an inadequate number of staff, at reasonable speed and at considerably less than would have been incurred had we followed all the official procedures rigidly.

The coincidence of first myself and later an assistant director being architects meant that we could in whatever cost to ourselves in one-way carry out a lot of architectural functions, including surveys of buildings, specific specifications of work and supervision on the site, at no cost to the polytechnic. This was a serious and costing, confirm that the jobs were reasonably priced. We knew for example that the work of bringing the main site libraries together on to three floors of the central building had been estimated by the city architect as needing £65,000 and that we had done it with our maintenance staff and local small contractors for £22,000.

The episode raises all sorts of issues, especially about the relationship between a polytechnic and its local authority and whether that relationship has any future. Time will tell.

The story I have been recounting is not, I suspect, unique. In calling in the police without consulting me as the head of the institution concerned, the leader of the council was, I understand, behaving in a manner wholly in line with practice in a local authority. However indecent such practice may seem to the outside observer to be, in doing so for the polytechnic, which is not a standard corporation department but a semi-autonomous body owned by the council but working within carefully defined articles of government, he may have acted unconstitutionally and may not have recognized that neither he nor the council has power to suspend polytechnic staff. What is clear to me is that such behaviour towards one of the leading educational bodies in the country is wholly indefensible; and the failure even to consult the head of the institution reveals a capacity for loyalty, trust and honour which deserves a place in the annals of political squalor.

for the educational needs of students abroad.

The Government has quite blatantly ignored their promise to institute a review. While admitting their predictions were grossly inaccurate they refused to discuss the actual outcome of their policies.

Yet they are eager to promote public debate about a system for conscripting young people for a national community service scheme which is not supported by a single national organization which represents significant numbers of young people.

It is surprising that some of us want to throw eggs?

Fiona Macgarratt

The author is national secretary of the National Union of Students.

wealth ones, have been permanently damaged. In Hongkong and other British dependencies full-cost fees have significantly heightened the hostility to the new nationality and citizenship proposals.

I am concerned that in the absence of any hint of a Government policy the proposals of the Overseas Students Trust are seen by many, desperate for a solution, as the only straw available. Criticism of them is muted because there is precious little else around.

These proposals, as *The THES* predicted last November, are dealt with the question merely in the context of Britain's international and trading interests and not also as an educational issue.

While I accept that we must deal with the needs of overseas students in international terms we must also cater

for the educational needs of students abroad.

The Government has quite blatantly ignored their promise to institute a review. While admitting their predictions were grossly inaccurate they refused to discuss the actual outcome of their policies.

Yet they are eager to promote public debate about a system for conscripting young people for a national community service scheme which is not supported by a single national organization which represents significant numbers of young people.

LETTERS TO THE EDITOR

Attracting research grants

Sir, - Now that universities and departments are struggling to maintain their shares of a shrinking pool of resources, it seems to be becoming widely accepted - not just in the natural sciences but throughout academic life - that success in attracting research grants is a key measure of excellence.

The rationale for this, perhaps, is that applications for funding are about the only area in which academics and academic institutions directly compete with one another in connexion with research. But it raises a major issue of principle which is very little discussed.

There are different kinds of academic research: some scholarship needs special equipment, research assistants, or other costly inputs; other kinds need only pen and ink, access to a good library, and time. Many (perhaps most) academic disciplines cover work of both sorts; but, increasingly vice-chancellors and heads of departments are urging all their colleagues to think about engaging in externally-fundable research projects in order to help show that their institutions are intellectually lively "centres of excellence". In other

words, universities are reacting to the dearth of public funds by shifting the balance of their research effort towards the most expensive kinds of research. Can I be the only one who finds this odd?

Yours faithfully,
GEOFFREY SAMPSON,
School of English,
University of Lancaster.

Sir, - the academic community are indebted to you for reports such as that entitled "Concern over the UGC's research league table". It is indeed important that the total research effort is taken into account, including other forms of government funding, such as research foundation grants as well as the vital industrial funding you mention, rather than just research council grants.

In technological universities the industrial and government funding is closely related to involvement in the industrial training provision for their students and the high level of employment of their graduates in productive industry, which the research programmes also support. We do therefore

indeed believe that a high proportion of industrially sponsored research is appropriate to these institutions, and staff put great effort into achieving this. Nevertheless, we are glad that our success rate in those applications we make to SERC is increasing and is commendably high. Both these factors make their own contribution to the quality of education the university provides at both undergraduate and postgraduate levels.

The significance of taking all sources of funding into account is illustrated by the fact that this university's research income exceeded 12 per cent of its total income last year, which puts it in the top third of universities, in contrast to the lower placing you quoted for Surrey and other well-regarded universities based solely on SERC grants; before that it had consistently been in the top half for some years, in the van of technological universities.

Yours faithfully,
MALCOLM B. WALDRON,
Chairman,
University of Surrey Research Committee, Guildford.

American comparisons

Sir, - I feel that I must point out that the comparisons made by Dr Boyson between British and American universities (*THES*, April 24) are both misleading and inaccurate. I have not had the opportunity to read the whole speech but the quotations and paraphrased section reveal a complete misunderstanding of American universities and of Harvard and Yale in particular.

Dr Boyson's comments have some truth in them but it is a truth that destroys his own argument. Yale and Harvard are certainly not "undistinguished" but their distinction comes mainly from their faculties and graduate schools. Undergraduates take four years to complete their degrees, a year longer than in Britain, and they receive a very general education, the standard of which cannot be compared to a British, specialist degree. This is mainly due to the intentionally low level of most courses and to the teaching methods, usually lecture courses for several hundred students at a time followed by small "sections" of at least 30 and taught usually by teaching assistants, that is graduate students and not faculty. Once you begin to include TAs in the staff-student ratio then a truer comparison can be made in terms of numbers but not in quality.

If foreign students are still coming to British universities despite, in the accurate words of Dr Boyson, "an evil right-wing Government", then it is because they, at least, recognize that those institutions still offer some of the best teaching in the world. The reputations of Harvard and Yale rest not on their teaching but on their extremely large graduate schools and on the publications of their faculty members; the latter would not produce so many if they did a comparable amount of undergraduate teaching to their counterparts in Britain. Harvard and Yale are quite notorious, in one sense, for the teaching strain they impose on their junior faculties and their graduate students.

Yours faithfully,
ANDREW GOODMYN
139 York Street, New Haven, Connecticut, 06511.

forced rationalization and amalgamation of colleges of advanced education and the phasing out of engineering at this university - both to impossible short and brutal timetables

represent state intervention in tertiary education. The public process which Taylor praises has been short-circuited by private supplementary funding from the chairman of the TEC which is not available for public discussion and criticism.

It is widely accepted that the TEC was already playing the government's hand for it, by scaling down and pruning the requests of its constituent bodies, including the universities council. No one in education, however, anticipated the ham-handed and doctrinaire disruption of its plans.

Whether in the long run the TEC can justify William Taylor's opinion is a moot point, but no one in the United Kingdom should be misled into thinking that the Australian educational policy process in 1981 is a model for study. Unless, you happen to be looking for something to avoid.

Yours faithfully,
J. ROY HAY,
Deakin University, Victoria, 3217, Australia.

A third voice

Sir, - I wish to bring to your attention (with reference to your leader of May 8) the fact that the third higher education trade union, the Association of Polytechnic Teachers, also holds its annual council meeting this month. We too are much concerned with the current problems that affect the whole of higher education. The unevenness of the cuts in public sector higher education, we believe, carries the risk of causing irreparable damage to some institutions. We shall be arguing for the establishment of a national body which can be seen to make fair decisions in bringing about rationalization.

Yours sincerely,
HEATHER EGGINS,
Chairman, Association of Polytechnic Teachers,
27 Elphinstone Road, Southsea, Hants.

Letters for publication should arrive by Tuesday morning. They should be as short as possible and written on one side of the paper. The editor reserves the right to cut or amend them if necessary.

University admission

Sir, - Mr A. G. Watts raised three issues which, he says, have regard to the UCCA system of university admission (*THES*, May 8). The first concerns the "practice in some high-demand subjects - notably medical schools - of discriminating against students who devote one or two of their choices to less competitive subjects". Such discrimination, if it did exist, would be a question for individual selectors and not for UCCA, which plays no part in selection policy.

The second issue seems to concern the various degrees of esteem in which individual institutions may be held by individual applicants. It is this did emerge as a "hierarchy of status" it would be a function of the need for individual choice, not of the UCCA system.

His third point is that "the increasingly arcane skills required to play the UCCA game discriminate in favour of schools sending large numbers of

students into higher education". Do large schools in fact have proportionately more success than smaller ones in securing the admission of their applicants through UCCA? And if this were so, could it be because large schools had better facilities, gave better advice, or had better applicants? UCCA does not know the answers to these questions, and has not sought to find them, because it has no business or desire to monitor the work of schools. But Mr Watts must produce facts before he can support the generalization he has made.

UCCA's own published statistics support the conclusion that, although school examination results are not the only factor, the better a candidate's examination grades the better are his chances of being accepted by his preferred university.

Yours sincerely,
L. R. KAY
General Secretary, UCCA, PO Box 28, Cheltenham, Glos.

– represent state intervention in tertiary education. The public process which Taylor praises has been short-circuited by private supplementary funding from the chairman of the TEC which is not available for public discussion and criticism.

It is widely accepted that the TEC was already playing the government's hand for it, by scaling down and pruning the requests of its constituent bodies, including the universities council. No one in education, however, anticipated the ham-handed and doctrinaire disruption of its plans.

Whether in the long run the TEC can justify William Taylor's opinion is a moot point, but no one in the United Kingdom should be misled into thinking that the Australian educational policy process in 1981 is a model for study. Unless, you happen to be looking for something to avoid.

Yours faithfully,
J. ROY HAY,
Deakin University, Victoria, 3217, Australia.

A third voice

Sir, - I wish to bring to your attention (with reference to your leader of May 8) the fact that the third higher education trade union, the Association of Polytechnic Teachers, also holds its annual council meeting this month. We too are much concerned with the current problems that affect the whole of higher education. The unevenness of the cuts in public sector higher education, we believe, carries the risk of causing irreparable damage to some institutions. We shall be arguing for the establishment of a national body which can be seen to make fair decisions in bringing about rationalization.

Yours sincerely,
HEATHER EGGINS,
Chairman, Association of Polytechnic Teachers,
27 Elphinstone Road, Southsea, Hants.

Letters for publication should arrive by Tuesday morning. They should be as short as possible and written on one side of the paper. The editor reserves the right to cut or amend them if necessary.

Rights, lefts and middles

Sir, - I am surprised to find myself described as an "unexpected" critic of some recent government policies toward the universities. Just because I previously opposed indiscriminate participation and politicization does not mean that I support the "other side" in all they may do. For that matter there are more than two sides to every question, just as there are several rights, lefts and middles. As universities are relieved on one front they are pressed on another.

I am in favour of fairly autonomous centres of learning, unassisted either by student communes or by an over-mighty state, including the kind of state officially dedicated to laissez-faire. I also hope that universities will not be seduced by journalistically accredited causes and the short-term pragmatic objectives of "the users". I must add that I don't see any inconsistency in first opposing an over-rapid expansion and then becoming alarmed by ham-handed contraction.

At Lisbon, I did not criticise every aspect of government policy or reject the need for universities to look for economies. But I did make three critical points, none of them original. If present policies are pushed to the point where there is a severe contraction in their numbers, a major international link will have been destroyed, and a source of British influence removed. There are certain values embodied in our universities radiating out to other societies. Again and again I'm struck by the ties set up with people abroad. We were told by our Portuguese hosts in Lisbon that they were largely adopting the Anglo-Saxon model, following their university experience in England.

The second point concerned the criteria likely to be adopted in the course of contraction. I give only one instance to indicate how crazy these may be. We are credibly informed that the more research money we have spent in the past, the more we have the right to survive in the future. I needn't mention how absurd it is to judge quality of work by quantity of money spent, but in any case in many subjects the most important advances are made by the use of books, not to mention the writing of them.

The third point may seem minor, but it is indicative. The music cuts typify a situation where resources, built up over many years and which have results in the long term, are destroyed for short term and dubious gain. The rise in the standards of British music has been spectacular and it has given us a place on the international scene never achieved before, except in the fifteenth and sixteenth centuries.

Anyone who has attended the performances of young people at the Albert Hall under the aegis of *The TES* knows how moving it is to see their dedication to standards of performance and interpretation. I can't believe the government would want to destroy such heritages of good.

Yours faithfully,
DAVID MARTIN,
London School of Economics and Political Science.

A third voice

The Government's proposals for reorganisation have given the impression that their main concern is to produce a tidy system. They have proposed to manage centrally the 29 English polytechnics plus the 31 institutions already centrally funded, together with another 38 colleges of higher education. This would embrace 87 per cent of higher education in the public sector and all teacher training. The signs are of a takeover of non-university higher education. That is not a valid aim, however. It would produce a multiplicity of institutions, with no common role. Would it not be better, though less tidy - to leave the 30 or so teacher training institutions and most of the liberal arts colleges?

To design a solution for the polys and to deal with the dozen or so equivalent institutions?

Of course, difficult lines would have to be drawn, but the Government should have the courage to state clearly that what it wants is a high-powered set of institutions to deal with the nation's skilled manpower needs.

Finding new ways to fund the polys



Keith Hampson

Whatever you may remember of 1979, I bet you cannot recall that it was "Polytechnic Awareness Year" - at least it was to the Secretary of the Committee of Polytechnic Directors. For in celebrating their tenth year, the polytechnics, quite correctly, felt that they needed to be more positive and forthright in telling the world what they were about.

Two years on and the only thing the public seems to grasp is that the polytechnics are places which breed and nurture the new radicals of the Left. Something has gone wrong. Not that ten years is very much in an evolutionary process and considering the nature of the birth and the traumas of their subsequent development, the polytechnics' record is remarkable good. But they lack a distinctive, easily understood philosophy.

Much of the argument about academic drift is misconceived, but it still holds sway. The humanities have come to play a greater part, largely in cope with the "rationalisation" of teacher training, but the bulk of social studies is commercially orientated and in most senses polytechnics are occupationally geared - though they have never been predominantly technical.

The advent of the polytechnics was an imaginative and much needed shift in higher education policy, yet the potential has not been realised. The answer is not to eliminate the shift by merging them into the university system.

The polytechnics are now more than ever likely to become the victims of local authority financial difficulties. Already local government is spending well over target - back in real terms to what they were spending three years ago. The new Left wants to spend as though there were no tomorrow. Draconian government action is bound to follow.

As government grant aid dries up, where then will local priorities lie? Possibly with the schools, more likely with bus fares, but hardly with the polytechnics.

The polytechnics have a vital role in the education and training, and increasingly re-training - of skilled manpower. It is the duty of the government to ensure that this problem is tackled on a national scale.

The polytechnics should be taken out of the control of local authorities. They should be funded directly, not through the cumbersome bureaucracy or rate support grant.

The Government's proposals for reorganisation have given the impression that their main concern is to produce a tidy system. They have proposed to manage centrally the 29 English polytechnics plus the 31 institutions already centrally funded, together with another 38 colleges of higher education. This would embrace 87 per cent of higher education in the public sector and all teacher training. The signs are of a takeover of non-university higher education. That is not a valid aim, however. It would produce a multiplicity of institutions, with no common role. Would it not be better, though less tidy - to leave the 30 or so teacher training institutions and most of the liberal arts colleges?

To design a solution for the polys and to deal with the dozen or so equivalent institutions?

Of course, difficult lines would have to be drawn, but the Government should have the courage to state clearly that what it wants is a high-powered set of institutions to deal with the nation's skilled manpower needs.